

Studies of Jews in Society 2

Barry R. Chiswick *Editor*

Jews at Work

Their Economic Progress in the American
Labor Market

 Springer

Studies of Jews in Society

Volume 2

Series Editor

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New York, NY, USA

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Editor

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Their Economic Progress in the American
Labor Market

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ISSN 2524-4302

ISSN 2524-4310 (electronic)

Studies of Jews in Society

ISBN 978-3-030-41242-5

ISBN 978-3-030-41243-2 (eBook)

<https://doi.org/10.1007/978-3-030-41243-2>

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Dedicated to Carmel.

Preface

I would like to write that this book on the American Jewish labor market experience over the past century and a half was thought out in advance over three decades ago. Unfortunately, that was not the case. It evolved slowly, step-by-step, chapter-by-chapter, until a large body of research emerged telling an interesting and important story.

Starting in the 1950s, economists developed a deep interest in understanding the nature of racial discrimination and in the determinants of the socioeconomic outcomes for disadvantaged minority groups, in particular African-Americans. In the mid-1970s, when I served on the senior staff of the President's Council of Economic Advisers, immigration became a more prominent public policy issue. I started research on immigrants to understand the determinants of their labor market adjustment in the United States (and later in other countries) and their impact on the US economy. This led to my studies of specific immigrant groups, including Hispanic-Americans and Asian-Americans. The former tended to be low-skilled, while the latter tended to be high-skilled immigrants.

I asked myself, why not apply the same tools that I used to study immigrants and racial/ethnic minorities to the study of American Jews? Although some social scientists had studied American Jews, especially their immigrant experiences, and writing about Jews was a common theme among some novelists, their analyses, important as they were, were largely based on qualitative analysis from small samples or for specific time periods. There was little work by economists, with the exception of some notable work by Simon Kuznets (the Nobel Laureate developer of national income accounting) and Arcadius Kahan (the noted economic historian of Russia), primarily on turn of the twentieth century Russian Jewish immigrants to the United States.¹ I thought that I could contribute to the social science literature by combining modern economic theory, in particular human capital theory, with modern statistical quantitative analysis of large data sets applied to the study of the experience of Jews in the American labor force.

¹For compilations of the research of Simon Kuznets and Arcadius Kahan on Jews in Russia and the United States, see Kuznets (2011) and Kahan (1986).

I quickly ran into two challenges. One was the concern expressed by a few, and held more quietly by many others, that research revealing Jewish economic success might generate negative social, cultural, and political consequences. Although I understood these concerns, I felt that studying and understanding Jewish achievement was important. Moreover, I believed then, and still do, that the study of groups that were more successful than average might generate insights into why some groups were less successful than average. These negative concerns expressed by others dissipated as my research progressed.

The other challenge was more daunting for quantitative research on a numerically small population. How can we identify Jews in census or survey data when the largest collector of relevant household or individual data (the US Bureau of the Census) had, and still has, a policy of not asking religion and masking responses that might indicate a person's religion? Identifying Jews in these data has been a methodological challenge that I address in the chapters in this book.

As I wrote these papers on American Jews, one idea led to another, one data set led to discovering another, and over the course of time, a body of research emerged. While many of the chapters in this book are the lightly revised versions of published papers, some are previously unpublished analyses. The introductions to the book and to each of the five parts provide a context for the volume and the linking of the various chapters.

While I am responsible for any and all errors of omission and commission, this book has benefited from my interactions with many others. Several of the papers in this volume have been coauthored. I thank my coauthors for joining me in this research: Eliezer B. Ayal, Carmel U. Chiswick, Stella K. Hofrenning, Jidong Huang, and Michael Wenz. I also express my appreciation to the numerous graduate students who worked as my research assistants (RAs) at the University of Illinois at Chicago and at the George Washington University over the course of this project, as well as for the financial and other support provided by these two universities. My working with coauthors and RAs has been a personally pleasurable experience as well as a learning experience for me – I learn from those with whom I work. This research has also benefitted from the comments received at the numerous seminars and conferences where I presented drafts of my various papers on American Jews. This book has also benefitted from the very helpful comments I received from the Association for the Social Scientific Study of Jewry (ASSJ) book series editor, Charles Kadushin, and the ASSJ anonymous reviewers of this volume. However, a particular thank you is extended to my most recent assistant, RaeAnn Robinson, who worked as the RA on one paper and on this book.

My biggest debt is owed to my wife, Carmel U. Chiswick, who has consistently encouraged my research in general, has been enthusiastic regarding my work on American Jews, has given me invaluable comments on the many drafts of the papers in this volume, and whose conversations with me on these and other topics have always enriched my life. Without her love and personal and intellectual support over nearly five decades, these chapters could not have been written.

“...the Jews are the most skilled of all the newer races.”

Paul H. Douglas (1919).¹

¹Paul H. Douglas (1919), “Is the New Immigration More Unskilled than the Old?” *Journal of the American Statistical Association*, June, p. 393.

Acknowledgments

I also appreciate the permission to reproduce here papers published in a variety of journals and edited volumes. Many of these chapters have had minor revisions from the originals to increase clarity. The journals are as follows:

- *Contemporary Jewry*
 - “The Occupational Attainment of American Jewry: 1990 to 2000,” *Contemporary Jewry*, 27, 2007, pp. 80–111.
 - “The Occupational Attainment and Earnings of American Jewry, 1890 to 1990,” *Contemporary Jewry*, 20, 1999, pp. 68–98.
 - “The Rise and Fall of the American Jewish PhD,” *Contemporary Jewry*, 29(1), April 2009, 67–84. Marshall Sklare Memorial Lecture, Association for the Social Scientific Study of Jewry, Toronto, December 2007.
 - “The Cost of Living Jewishly and Jewish Continuity” (with Carmel U. Chiswick), *Contemporary Jewry*, 21, 2000, pp. 78–90.
- *Economic Development and Cultural Change*
 - “The Economics of the Diaspora Revised,” (with Eliezer Ayal), *Economic Development and Cultural Change*, July 1983, pp. 861–875.
- *Explorations in Economic History*
 - “Jewish Immigrant Skill and Occupational Status at the Turn of the Century,” *Explorations in Economic History*, 28(1), January 1991, pp. 64–86.
 - “Jewish Immigrant Wages in America in 1909: An Analysis of the Dillingham Commission Data,” *Explorations in Economic History*, 29(3), July 1992, pp. 274–289.
- *Journal for the Scientific Study of Religion*
 - “The Earnings of American Jewish Men: Human Capital, Denomination and Religiosity,” (with Jidong Huang), *Journal for the Scientific Study of Religion*, 47(4), December 2008, pp. 694–709.

- *The Journal of Human Resources*
 “A Method for Proxying a Respondent’s Religious Background: An Application to School Choice Decisions” (with Stella Koutroumanes Hofrenning), *The Journal of Human Resources*, 34 (1), Winter 1999, pp. 193–207.
- *Quarterly Journal of Economics*
 “Differences in Education and Earnings Across Racial and Ethnic Groups: Tastes, Discrimination, and Investments in Child Quality,” *Quarterly Journal of Economics*, August 1988, pp. 571–597.
- *Research in Labor Economics*
 “The Linguistic and Economic Adjustment of Soviet Jewish Immigrants in the United States, 1980–2000,” (with Michael Wenz), *Research in Labor Economics*, 24, 2006, pp. 179–216.
- *The Review of Economics and Statistics*
 “Labor Supply and Investment in Child Quality: A Study of Jewish and Non-Jewish Women,” *The Review of Economics and Statistics*, Vol 68, No. 4, November 1986, pp. 700–703. The expanded version used here was later published in *Contemporary Jewry*, 9, Fall 1988, pp. 35–61.
- *Shofar: An Interdisciplinary Journal of Jewish Studies*
 “The Billings Report and the Occupational Attainment of American Jewry, 1890,” *Shofar: An Interdisciplinary Journal of Jewish Studies*, 19, No. 2, Winter 2001, pp. 53–75.

The following is the edited volume:

Oxford University Press

“The Economic Progress of American Jewry: From Eighteenth Century Merchants to Twenty-First Century Professionals,” in Aaron Levine, ed., *The Oxford Handbook of Judaism and Economics*, New York: Oxford University Press, 2010, pp. 625–645 (substantially revised)

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Chapter 1

Introduction



Barry R. Chiswick

Have Jews Been Successful in America?

Every year in October the winners of the Nobel Prize in various fields are announced – World Peace, Chemistry, Physics, Physiology and Medicine, and Literature, and since 1969, Economics. The winner of each prize is selected by a different committee, which recognizes a person's or number of persons' (or in the case of the World Peace Prize – a group's) fundamental contribution in their respective field. What is most striking is the preponderance of Jews among the winners. Some are known worldwide: Albert Einstein for Physics (1921), Elie Wiesel for World Peace (1986), Saul Bellow for Literature (1976), and Milton Friedman for Economics (1976). They are all individuals with great accomplishments.

Taken as a whole, within prize categories, the accomplishments of Jews are even more impressive. Of the worldwide winners of the six Nobel Prizes since their inception, as of 2017, the proportion of Jewish winners range from 9 percent for the World Peace Prize, to 39 percent for Economics.¹ In Literature, Jews have won 13 percent of the awards, and in the natural sciences: 20 percent in Chemistry, 26 percent in Physics, and 28 percent in Physiology and Medicine. Yet, Jews currently constitute only 0.2 percent (i.e., two Jews for every thousand persons) of the world population.

¹For information on Jewish recipients of the prizes noted in this and the following paragraphs, see [JINFO.org](https://www.jinfo.org) (n.d.-a, n.d.-b, n.d.-c, n.d.-d).

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Examining the Nobel Prize winners who were citizens of the United States at the time they received the award, the Jewish proportions are even higher. Jews now constitute about 2 percent of the U.S. population, down from a peak of nearly 4 percent in the late 1930s. Among U.S. citizens, Jews received 10 percent of the Peace Prizes and 51 percent (!!) of the Economics Prizes. Equally impressive are the 33 percent for Literature, 30 percent in Chemistry, 38 percent in Physics, and 39 percent in Physiology and Medicine awarded to Americans.

Jews have achieved substantial recognition in other areas as well. The Fields Medal in mathematics is often referred to as the equivalent of a Nobel Prize, as there is no Nobel Prize in mathematics. As of 2012, Jews received 29 percent of the Fields Medals. Of the Pulitzer Prizes, as of 2017, Jews received 14 percent of the prizes for fiction and 53 percent for general non-fiction.

Clearly, individual Jews are overwhelmingly recognized among the giants in their fields by the Nobel, Fields, and Pulitzer committees. These are individuals of truly extraordinary talent. The Jewish and non-Jewish winners constitute a very small group of individuals who have transformed science and literature, or have been recognized for their efforts to promote world peace.

A community may have a small group of very high achievers, while the bulk of the community does not attain high levels of accomplishment. In more technical terms, there can be a highly skewed distribution of ability, talent, or scientific success, reflecting very high levels of achievement for a small number of individuals, while the achievement for the bulk of the group is quite low. Is this the experience of American Jews? Is the American Jewish community composed of a small group of elites that have achieved notable success and recognition while the bulk of the community has lagged behind, or has the community on average had a high level of success compared to Americans as a whole?

This book is an edited set of research papers that addresses and documents the high level of achievement of Jews as a whole in the United States labor market particularly over the past 160 years, and provides insights into the reasons for their success. It will do this primarily by analyzing large data sets where Jews living in the US can be identified, sometimes directly and more often using indirect techniques. It documents that Jews, as a group, have achieved a high level of educational attainment, occupational status, and earnings or income in spite of their past immigrant status and in spite of the discrimination they sometimes faced in seeking education and in employment and promotion.

This book closes with a discussion of possible reasons for this success and the economic prospects for American Jews in the future. It is hoped that a deeper understanding of this phenomenon may also provide insights regarding how other groups in the US may mitigate the hurdles and disadvantages that confront them.

The Jewish Population of the United States²

In the United States today there are approximately six million people who identify as Jews by religion or ethnicity and they constitute approximately 2 percent of the population. Jews were never more than just under 4 percent of the US population, with the peak in the late 1930s. They arrived in several waves of immigrants from various origins.

With the fear of the imposition of the Inquisition as the Portuguese assumed control of the Dutch colony in Recife, Brazil, a small group, 25 individuals, sought refuge in another Dutch colony, New Amsterdam in 1654. They constituted the first Jewish community in what is now the United States. They were Sephardic Jews, that is, the descendants of Jews who fled the Spanish and Portuguese persecutions of Jews in the late fifteenth and early sixteenth centuries. As such, their primary language was Ladino, the language of Sephardic (Spanish) Jewry. Small numbers of other Sephardic Jews continued to arrive and by the time of the American independence the Jewish community in the United States numbered about 1000–2500. In the colonial period, Jews tended to settle in the east coast seaport cities including Charleston, Newport, and New York, among others. Due to their previous experience in commerce and connections with Jews elsewhere, the small US community specialized in international mercantile trade and finance activities.

The first large wave of Jewish immigrants were primarily from the German-speaking states of central Europe, as part of a larger influx of German immigrants whose lives had been disrupted by the revolutions and civil wars in Europe in the 1840s and 1850s. By 1860, the Jews in the US numbered about 150,000–200,000, or about 0.6 percent of the free population. Although many settled in larger eastern seaport cities, they were more likely than earlier Sephardic Jews (or the later Russian and Eastern European Jews) to be dispersed across the country, with a concentration working as merchants. Often, the men worked first as peddlers, then as small merchants and a few evolved into large department store magnates.³ Their numbers grew to about 250,000 (0.5 percent of the population) by 1880.

Starting in the early 1880s and lasting until the US imposed immigration restrictions on southern and eastern Europeans in the 1920s, another even larger wave of Jewish immigrants came from Russia and Eastern Europe. These predominantly Yiddish-speaking Jews coming from a very poor area of Europe tended to be more traditional than the German Jews and to be more geographically concentrated, settling in ethnic enclaves in the industrial cities of the northeast (especially New York)

²For estimates of the size of the Jewish population of the United States from 1776 to the present, see Jewish Virtual Library, (n.d.). The data are for the enlarged Jewish population, that is, Jews born to Jewish parents, converted to Judaism, other persons of Jewish parentage, and non-Jewish household members.

³The Bloomingdales, Saks, Neiman Marcus, Gimbels, Goldwater, and Abraham and Strauss department stores, among others, were established by German Jewish immigrants or their sons born in the US.

and the Midwest (Chicago). By 1927 there were approximately 4.2 million Jews in the US, constituting about 3.4 percent of the total population.

This was followed by numerically smaller waves of Jewish refugees arriving in the 1930s from Germany, European Jews arriving after WWII who had been in concentration camps and displaced persons camps, and then refugees from the USSR and newly independent states of the former Soviet Union in the 1970s and subsequent decades.

As will be shown in the following chapters, a consistent pattern emerges. When they first arrive, the Jewish immigrants are not English speakers and are in lowly economic positions, but then they experience rapid progress in learning English and in improving their economic status (whether measured by occupation or earnings). After working for a decade or two, they tend to attain economic parity and often exceed that of not only other immigrants but also native-born Americans. Their US-born children have even greater achievements than the native-born Americans who are not Jewish.

Who Is a Jew in Census and Survey Data?

A quantitative analysis of American Jewish labor market achievement compared to other Americans has three requirements: First, there needs to be data on economic attainment, whether measured by income, labor market earnings, occupation, or some other measure. Second, there needs to be a mechanism for identifying who is a Jew (or likely to be Jewish) in the data. Third, given that Jews are, and have always been, a very small proportion of the American population, there needs to be a sufficiently large number of Jews in the data for a meaningful statistical analysis.

For the purpose of allocating seats in the US House of Representatives, the Constitution requires that a Census of the entire population of the country be conducted every ten years, in the year ending in “zero.”⁴ The first census was conducted in 1790, in which the enumerators recorded the demographic characteristics of the members of the household. The 1850 Census has been referred to as the first modern census. It focused on the individual rather than the household and expanded the list of questions to include the respondent’s occupation (if male) and country of birth, among other items. This would provide the earliest systematic, quantitative data on the economic status or labor market achievement of Americans. Since the 1940 Census until the 2000 Census, the US decennial Census included questions on the respondent’s income or earnings in addition to occupation. Starting with the 2010 Census, the number of questions in the decennial Census was sharply reduced to a few basic items, with the previously obtained Census data on socio-economic conditions now obtained from the monthly American Community Survey.

⁴For the questions asked in the decennial censuses of the U.S. from 1790 to 2000, see U.S. Bureau of the Census (1979, 2002).

The decennial Census and the American Community Survey have never asked for the respondent's religion and will mask any response that specifically identifies a person's religion, such as responding Mormon or Jewish on an ancestry question. Various indirect techniques have been developed and applied to "identify" Jews in Census data. The usefulness of these techniques varies across time and censuses. These techniques include speaking (as a child or currently) a traditional Jewish language: Hebrew (the language used in Jewish religious practice), Yiddish (the traditional language of East European and Russian Jews), or Ladino (the language spoken by Sephardic Jews, the descendants of those who fled the Inquisitions in the Iberian Peninsula). Another is being born in Russia or having a Russian-born parent.

Other techniques have been used for identifying Jews in non-Census government data and in privately collected samples. These include explicitly asking religion in the survey, using synagogue lists of members, and the respondent having a surname that is on a list of Distinctive Jewish Names (DJN), that is, surnames prominent among Jews but very rare among non-Jews. Another is to assign a probability of being Jewish (or Catholic, Protestant, or of no religion) to a respondent based on the probability that a person with his or her ancestry is of that religion.

Each of these indirect techniques has two types of potential errors. One is identifying as Jewish someone who is not Jewish, such as a Russian Orthodox Christian who immigrated in the same period (late nineteenth century and early twentieth century) as the large Russian Jewish migration, or a non-Jew who has a "distinctively Jewish name" – such as a non-Jewish Kohan. The other error is not identifying as Jewish someone who is Jewish. Hence an American Jew of French origin would not be counted if the Jewish identifier is Russian birth or parentage. Or, a Jew whose surname, such as O'Hara, is not on a DJN list would be misclassified.

As will be discussed in the separate chapters, however, there are some data collected by the US government that did include information on religion and have a sufficient number of Jews for analysis.⁵ Some non-government sponsored data are also examined, such as the National Opinion Research Center's (NORC) General Social Survey and the 1990 and the 2000/2001 National Jewish Population Surveys. These data have a direct question on religion, thereby permitting the identification of those who self-identify as Jewish.

If the classification error is random, meaning that an incorrect identification of who is a Jew is not related to a characteristic relevant for our study, such as earnings, then the measured Jewish – non-Jewish difference in this characteristic is biased toward zero in the estimate of the true, but unknown, difference. The extent of the bias is related to the extent of the measurement error. One gets a larger sample of persons identified as Jews under any of these indirect techniques the broader the definition of who is Jewish compared to a tighter, more narrowly defined definition. The downside of a broader definition is greater random measurement error and a greater bias toward zero in the measured difference between the two groups.

⁵These include the data from the 1890 Billings Report on the "Vital Statistics of the Jews of the United States" and the March 1957 Current Population Survey. The 1911 Dillingham Immigration Commission Report also identified Jews as a separate ethnic group.

Of course, the measurement error may not be random. Suppose more successful Jews are more likely than other Jews to change their surname from a DJN to a non-DJN or that there is more discrimination against Jews with a DJN than against other Jews. This too would bias the measure of group differences by lowering the measured achievement level of those still identified as Jews.

The bias inherent in Jewish identifiers for the US is small for non-Jews, but potentially larger for Jews. If 50 percent of the Jews are misclassified as being non-Jews, and Jews are two percent of the population, only one percent of those classified as non-Jews are misidentified Jews. The bias in estimates for non-Jews would be trivial. On the other hand, misidentifying 50 percent of the Jews could result in substantial undercounting of Jews and potential measurement error for the achievement of Jews. The analyses reported here do not attempt to count the number of Jews, or the proportion of Jews, in the population. They seek to ascertain the skill and labor market status of persons identified as having a high probability of being Jewish compared to others. It does this by using a variety of direct and indirect Jewish identifiers. Fortunately, the patterns observed seem to be robust regardless of the Jewish identifier. This suggests that these misclassification errors do not substantially distort the pattern of Jewish – non-Jewish differences. Moreover, the measured difference would underestimate the true difference.

Cross-Sectional vs. Life-Cycle Data

The data analyzed in the chapters that follow are cross sectional, that is, they report the characteristics of the population under study at a point in time. Ideally, one would also like to study longitudinal data, that is, data following individuals over their lifecycle. Lifecycle or longitudinal data are quite rare for the US population and, to my knowledge, non-existent for American Jews. In principle, problems might arise with cross-sectional data if more recent cohorts, of say age groups or immigrants, have a higher (lower) labor market ability than earlier cohorts, other measured characteristics the same. If so, cross-sectional data would generate a bias downward (upward) in the estimated effect of the growth in their earnings with time in the US.

There is no particular reason for believing that the otherwise unmeasured dimensions of labor market ability of cohorts, whether referring to age or immigrant cohorts, change in a systematic manner over time. Since the analyses focus on Jewish – non-Jewish differences, there is no reason to believe that there are systematic changes across cohorts in Jewish – non-Jewish differences in unmeasured labor market ability. Moreover, empirically it is found that the observed general patterns do not vary with the definition of who is a Jew (and hence who is not Jewish), the source of the data (census or survey, government or non-government), or the time period over the century and a half of data. Therefore, it is inferred that the use of cross-sectional data does not distort the implications of the findings.

Outline of the Book

The purpose of this book is to study ordinary American Jews. That is, it does not focus on the elite members of the population, but rather on the average members of the Jewish work force in comparison to the average of the remainder of the population. Moreover, the focus is on men until recent decades. This is because until the last half century the labor force participation rates of women, especially married women, were very low. Households depended primarily on the earnings of men, whether husbands or adult sons living at home. In general, unmarried women in the paid labor force viewed themselves as temporary workers until they married and left employment. However, because of the increase in female labor supply in recent decades an analysis of the occupational attainment and labor force participation of Jewish and non-Jewish women in the post-WWII period is included.

The chapters in this book are in five parts that are in chronological order. Each part begins with an introduction that clarifies the relationships among the chapters that follow. The analyses employ a variety of techniques for identifying Jews when there is no direct Jewish identifier.

Part I, Chaps. 2, 3, 4 and 5, covers the skill level, occupations, and earnings of “Early Immigrants,” studying Jews and non-Jews in the 1860 Census of Population, an 1890 survey of 10,000 Jewish households, data from an early twentieth century Census, and data from the 1911 Dillingham Immigration Commission report.⁶ Whether the analyses are for occupation or earnings, these chapters demonstrate the high level of achievements for male Jewish immigrants and their US-born sons. They also demonstrate the larger effect of labor market experience in the US on the achievements of Jews than of others.

Part II, “Upward Mobility,” Chaps. 6, 7, 8, 9 and 10, focuses primarily on the occupational attainment of Jewish men compared to other men over the period 1890–2000. Jewish women are studied in this part with analyses of their occupational distributions in 1990 and 2000. These analyses are based on data from a variety of Census and non-Census sources, about one per decade over this 110 year period. To the extent possible, these chapters also examine earnings, but this is far more limited because the Census Bureau did not ask about individual earnings or income until the 1940 Census, and then in that year only for wage earners. These analyses include a chapter (Chap. 8) on the most recent large wave of Jewish immigrants, those who arrived since the 1970s from the former Soviet Union (FSU) and its successor states, focusing on their acquisition of English language skills and their earnings.

⁶In these early sources, there are no data on educational attainment or level of schooling, other than a self-reported answer as to whether the respondent was “literate.” Literacy referred to the ability to read or write, presumably in any language. There is no information on the degree of literacy. Literacy was not universal, but literacy rates were higher for native-born white men than among the foreign born from Northwestern Europe, followed by Jewish immigrants, with others from Southern and Eastern Europe having lower rates of literacy. As literacy became nearly universal over time, it was replaced by questions on years of schooling.

This is followed by a chapter on one type of education, the PhD degree: Chap. 9, “The Rise and Fall of the American Jewish PhD.” It shows how the receipt of the PhD by Jewish men and women compared to others changed over time in response to changes in discrimination against Jews in both the educational sector and in the broader labor market for high-level manpower, as well as the long term upward trend in women’s high level of education.

Chapters 6, 7, 8 and 9 demonstrate a high achievement level – upward mobility – over the course of the twentieth century. These high achievements are found whether measured by educational attainment, earnings, or occupational status and by the larger effects on earnings of investments in skills (whether measured by schooling or labor market experience) among Jews. This record is broad based among Jews and is independent of time period, method for identifying Jews in data, immigrant generation, and gender.

The final chapter in Part II analyzes a hypothesis frequently advanced to explain the high level of education among American Jews, referred to as the Diaspora Hypothesis. The hypothesis says that the discrimination and repeated expulsions and property expropriations experienced by Jews in Europe over the centuries resulted in high levels of investment in the portable assets, schooling and job skills, at the expense of investments in land and physical capital that are easier to expropriate. The hypothesis further postulates that this established patterns of behavior that persisted well into the twentieth century in the US among American Jews. In Chap. 10, “The Economics of the Diaspora Revisited,” the implications of the hypothesis are discussed conceptually in terms of the portability (can you carry it with you?) and transferability (is it useful elsewhere?) of investments and assets. The chapter demonstrates that the diaspora hypothesis is not supported by the data for American Jews.

Part III focuses on “Women and Children” in three chapters, Chaps. 11, 12 and 13. Chapter 11 is on “Labor Supply and Investment in Child Quality: A Study of Jewish and Non-Jewish Women,” and, in particular, on the effects of their education and children on their labor supply. As expected, having children reduces the labor supply of adult women, and the reduction is greater the larger the number and the younger the age of their children. This chapter shows that Jewish women in the post-WWII period responded differently than other women – children have a more negative effect on Jewish women’s labor supply, especially when the children are young and mothers’ time inputs are most important.

The next chapter on “Differences in Education and Earnings across Racial and Ethnic Groups” (Chap. 12) views American Jews as just one of many groups in the US population. It introduces a trade-off between the number of children and parental investment per child, where these investments include time inputs (the inverse of mother’s labor supply) and parental money expenditures. It demonstrates that viewing the Jewish population as one among many racial/ethnic groups supports the hypothesis that the low Jewish fertility and the low labor force participation of Jewish women when young children are present in the home, and their greater labor supply when there are no children, are associated with the high education level and high returns from skills of the next generation of Jewish adults.

Part III closes with a demonstration of an alternative methodology for identifying Jews (and persons of other religions) in census and survey data based on the respondent's reported ancestry. It then applies this algorithm in a study of the choice of private schooling over public schooling of children by the likely religion of their parents. It shows that Jewish children are as likely as Protestant children, and less likely than Catholic children, to attend public schools.

Part IV, "The Value of Jewish Time," has two chapters that focus on a person's time as a scarce resource. We all have only so many hours in a day, days in a year, and years in our lifetime. People with high earnings potential have a high value of time that influences how they allocate their time among the many potential activities.

Chapter 14 on "The Cost of Living Jewishly and Jewish Continuity" discusses how the high level of success in the labor market affects the costs of living a Jewish life. This cost is not merely the high money cost of kosher foods or the money costs of financing synagogue membership or even a Jewish education for one's children. Perhaps more important is the time cost – the time devoted to Jewish study and religious and cultural practices. Jewish religious and cultural practices are time intensive activities. Thus, American Jewish labor market success, which provides the high income to support living a Jewish lifestyle, is responsible for a high time cost of being Jewish and encourages finding ways of mitigating the time devoted to being and remaining Jewish.

Time devoted to the study of religious texts and time devoted to religious practice tend to detract from time devoted to formal secular schooling or on-the-job training relevant for labor market success, as well as time devoted to working. This issue is explored in Chap. 15, "The Earnings of American Jewish Men: Human Capital, Denomination, and Religiosity," an analysis of the association among religiosity and religious practice on the one hand, and labor market outcomes on the other, among American Jewish men using the 2000/01 National Jewish Population Survey.

The final section, Part V, "Ordinary People, Extraordinary Outcomes," consists of two chapters. Chapter 16 on "The Economic Progress of American Jewry: An Overview" presents a broad brush summary overview of the consistently high level of Jewish achievement from Colonial times to the present in the labor market compared to other Americans. It summarizes the findings on Jewish educational, occupational, and earnings achievements compared to non-Jews presented earlier in this volume. It also analyzes the changing patterns of Jewish self-employment as a consequence of immigrant assimilation, the achievements of their US-born descendants, and their responses to the changes over time in the US economy. In addition, it discusses Jewish wealth accumulation compared to those who are not Jewish. These achievements do not mean there is no poverty in the American Jewish community, but it does show that these achievements are broad based, and not limited to a small intellectual or entrepreneurial elite. The chapter therefore answers the question raised earlier in the Introduction: "...has the community on average had a high level of success compared to Americans as a whole?" The answer is a definite "yes."

The last chapter, the "Epilogue: Why the Jews Flourished in America" (Chap. 17), is an analysis of alternative hypotheses as to why there has been such educational and economic success among American Jews compared to other Americans.

The examination of various hypotheses regarding this success concludes that there is no one single magical explanation, but that a variety of factors may account for this remarkable achievement – “Ordinary People, Extraordinary Outcomes.” Prominent among these factors is the greater religious and economic freedom that Jews experienced in the largely free market economy of the US, and a long-standing favorable cultural attitude among Jews toward education, analytical reasoning, and decision making skills, which has allowed Jews to flourish in the American economy. Both were necessary; either by itself could not have resulted in the impressive achievements, but together they did. The chapter closes with a discussion of the prospects for the educational attainment and economic status of American Jewry relative to other Americans in the remainder of the twenty-first century.

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Part I

Early Immigrants

Part I, “Early Immigrants,” presents in four chapters analyses of the occupational status and earnings of Jewish men compared to that of non-Jewish free men from 1860 to 1909. It uses census and survey data and different techniques to identify those with a greater likelihood of being Jewish. These methods include using the Distinctive Jewish Name (DJN) technique, from lists of Jews, speaking a traditional Jewish mother tongue, self-reporting of Jewish identity, and being of Russian birth or parentage. The Jewish immigrant men show a steeper improvement in their economic status with time in the US than do other immigrant men, and among both the immigrants and native born a higher level of achievement than others with the same demographic characteristics.

The 1850 Census of Population of the United States is often referred to as the first modern Census. It was the first to focus on the individual, as distinct from the household, as the respondent and the first to inquire into the nativity, occupational attainment (for men only), and education (literacy) of each person.¹ But in 1850 the Jewish population was still very small and many were recent immigrants who arrived in the 1840s. As a result, our quantitative analysis of American Jewish economic attainment starts with the 1860 Census of Population, which was completed before the start of the Civil War in 1861. By then, there were a sufficient number of US-born and foreign-born Jewish men in the population to facilitate a statistical analysis of their occupational attainment compared to other free men in the US.

The First chapter in Part I is on “The Occupational Status of Jews in the United States on the Eve of the US Civil War.” It uses the Distinctive Jewish Name (DJN) technique to identify individuals with a higher probability of being Jewish. These were predominantly German Jews. It uses the data on reported occupation to

¹ There are apparently no systematic quantitative data on the skill level or the economic attainment of individuals in the United States during the colonial period or during the first three-quarters of a century following independence. For the questions asked in the decennial census of the US from 1790 to 2000, see U.S. Bureau of the Census (1979, 2002). For estimates of the Jewish population of the United States from 1776 to present see Jewish Virtual Library (n.d.).

compare the occupational distributions of identified Jewish men with other free men, and then uses the Duncan Socioeconomic Index (SEI) to measure the occupational status of these men.

In the 1860 Census, the Jewish men were more likely than other free men to be in managerial, clerical, machine operator, and sales (especially as peddlers) occupations. They were far less likely to be in farm occupations (whether as owners, tenants, managers, or laborers) or working as clergy or in other religious occupations. Other variables the same, the DJN Jewish immigrants had a higher SEI than did other immigrant or free US-born men. Remarkably, as later chapters will show, these are patterns found consistently over the next 140 years for American Jews.

Starting in about 1881, there was a resurgence of Jewish immigration, but this time primarily from Russia and Russian-occupied Poland, as well as other parts of Eastern Europe. These were very poor countries and there was a concern that these new immigrants would be unassimilable. The US government authorities were interested in identifying the characteristics and adjustment in the US of this new Jewish population, but they knew that the Jews could not be identified in the 1890 Census. The Office of the Census commissioned John Shaw Billings, Surgeon General of the United States, to prepare a report on the “Vital Statistics of the Jews of the United States” (1890), which was based on a survey of 10,000 Jewish families that had lived in the United States since 1885 (Billings, 1890). These data are analyzed in Chap. 3, “The Billings Report and the Occupational Attainment of American Jewry, 1890.”

Jews were identified through lists provided by rabbis and presidents of Jewish congregations. As a result, the survey would have under-represented unaffiliated and geographically isolated Jews. Because the Russian and Eastern European Jewish immigration was only just getting underway, the respondents in the Billings Report were predominantly German Jews: 55 percent of the adults reported that their mother was born in Germany, compared to 21 percent born in the US and 10 percent in Russia/Poland.

Using the Billings Report data on Jews and the 1890 Census for the US population, the occupational distributions of the Jewish men are compared to white men. The Jewish men were primarily engaged in sales (57 percent) and clerical (20 percent) occupations, while white men were primarily employed in laborer, agricultural, and machine operative jobs. Jewish women were less likely to report they had an occupation than white women in general.

The 1900 Census of Population is used in the fourth chapter to study “Jewish Immigrant Skill and Occupational Attainment of Adult Male Jewish Immigrants at the Turn of the Century.” Jews are identified as those who are of Russian origin – that is, either they or at least one of their parents were born in Russia or Poland. Compared to the native-born white men, foreign-born Jews were more likely to be in managerial, sales, craft, operative, and non-farm laborer occupations, and less likely to be professionals and far less likely to be in agricultural jobs. Jewish immigrants experienced more rapid improvement in their occupational attainment than did other immigrants and reached parity with Western European and Canadian immigrants after 5.5 years and with the native-parentage white men at 14 years in

the country. The US-born children of the Russian Jewish immigrants outperformed in occupational prestige scores even native-parentage white men.

The fifth chapter is “Jewish Immigrant Wages in America in 1909: An Analysis of the Dillingham Commission Data.” Immigration was an intense political issue in the early years of the 20th century and Congress established in 1907 the U.S. Immigration Commission, referred to as the Dillingham Commission after its chairman, a Senator from Vermont. This chapter analyzes the earnings data in the statistical tables published in 1911. Based on self-reporting, the Commission identified “racial” categories (which today would be called ethnic groups), of which two were “Hebrew-Russian” and “Hebrew-Other.” The surveys of production workers were conducted in 1909 in selected immigrant-intensive mining and manufacturing industries. The Jews had higher rates of literacy than other Southern and Eastern European immigrants, although a lower literacy rate than the native born and Northwestern European and Canadian immigrants. Their earnings increased with duration in the US more rapidly than other immigrants. Other variables the same, Jewish immigrant production workers’ weekly wages were 14 to 20 percent higher than other immigrants, and they reached parity with native-born production workers after only 4.5 years in the US.

Thus, these four chapters covering the period 1860 to 1909, using four different Jewish identifiers document that Jewish immigrants in this period had higher levels of literacy than other Southern and Eastern European immigrants, steeper increases in occupational status and earnings with duration in the US than other immigrants, and achieved a higher socioeconomic status, measured by occupation or earnings, than other immigrants and at least parity with native-born white men after a relatively short time in the US. These early developments foreshadowed patterns found in Part II, throughout the 20th Century.

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Chapter 2

The Occupational Status of Jews in the United States on the Eve of the US Civil War



Barry R. Chiswick

Introduction

The Jewish population of the United States has been estimated at between 1000 and 2500 at the time of the Declaration of Independence, and it was predominantly of Sephardic origin. The Jewish population increased to about 15,000 by 1840. It increased rapidly to about 50,000 to 100,000 by 1850, and about 150,000 to 200,000 on the eve of the Civil War in 1860 (Table 2.1). Jews then constituted about one-half of one percent of the 27 million free people in the US.

The relatively large increase in US Jewry was part of the rapid increase in immigration in the 1840s and 1850s. Of more than 4.2 million immigrants in these two decades (Table 2.2), 4.0 million came from Europe. Most of these European immigrants came from the German states (1.4 million were from German states of whom 1.0 million arrived in the 1850s), Ireland (1.7 million), and the United Kingdom (England, Scotland, and Wales, 664 thousand). Very few came from Russia or Poland (about 1000), which became major source countries in the late 19th and early 20th centuries. The spike in immigration from Ireland and Germany in these two decades was due to different push factors, namely the Irish potato famine and the revolutions and civil turmoil that engulfed the German states.

I appreciate receiving from the Minnesota Population Center, University of Minnesota the one-percent Public Use Microdata Sample (PUMS) of the 1860 US Census of Population. I also appreciate receiving data on the Jews in the Union Army Veterans sample from the Center for Population Economics, University of Chicago Graduate School of Business and, in particular from Christopher Roudiez, and interactions with Ira Sheskin on the Distinctive Jewish Name (DJN) technique. Financial support from the George Washington University is also acknowledged. The excellent research assistance of RaeAnn Robinson is most appreciated.

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Table 2.1 Estimated Jewish population of the United States, 1776-1900^a

Year	Jewish Population
1776	1000–2000
1800	2000–2500
1820	2650–5000
1830	4000–6000
1840	15,000
1850	50,000-100,000
1860	150,000-200,000
1870	200,000
1880	230,000-280,000
1890	400,000-475,000
1900	937,800-1,058,135

^aEstimated number of persons born to Jewish parents or of Jewish parentage or converted to Judaism

Source: <http://www.jewishvirtuallibrary.org/jsource/US-Israel/usjew-pop1.html>

Table 2.2 Admission of permanent resident aliens by Country of Birth, 1820-1859^a (in thousands)

	1820–29	1830–39	1840–49	1850–59
<u>Total</u>	128.5	538.4	1427.3	2814.6
<u>Europe</u>	99.6	422.9	1369.4	2622.6
Germany	5.8	124.7	385.4	976.0
Ireland	51.6	170.7	656.2	1029.5
United Kingdom ^b	26.3	74.4	218.6	445.3
Russia	0.1	0.3	0.5	0.4

^aNo data prior to 1820. Rounded to nearest hundred. Russia refers to Russian Empire, including Russian occupied Poland. Land arrivals not completely enumerated in these years

^bEngland, Scotland, and Wales

Source: 2013 Yearbook of Immigration Statistics, U.S. Department of Homeland Security, Office of Immigration Statistics, Washington, D.C., August 2014, Table 2.2

There were very few Jews in Ireland or the United Kingdom at that time. Most of the Jewish immigrants would have come from the German states.¹ Thus, the adult Jewish population of the United States on the eve of the Civil War (1860) would have been composed disproportionately of fairly recent immigrants from the German states, to be referred to here as German Jews.

¹The Billings Report (1890, Table II), based on a survey which had a direct Jewish identifier, presented data by age on the country of birth of the mother of the Jews surveyed who had lived in the US for at least five years as of December 31, 1889. The mother's country of birth was Germany for 72 percent of the Jews age 45–55 (age 15–25 in 1860), 77 percent for those age 55–65, and 77 percent for ages 65 and over. Thus, about three quarters of the Jews of working age in 1860 would have a German-born mother. The US was the mother's country of birth for about 3 percent of those age 45 and over. (Chiswick 2001, Table 2.1, and Billings 1890, Table II).

The 1860 Census of Population

Although the first decennial US Census of Population, as mandated by the Constitution, was taken in 1790, it was not until the 1850 Census that there were extensive questions on demographic and labor market characteristics.² This continued in the 1860 Census. The original census responses from 1860 were preserved and the census data, including the name of the respondent, were recently digitalized and made available as a one-percent Public Use Microdata Sample (PUMS file) by the Minnesota Population Center at the University of Minnesota (Minnesota Population Center, 2015; Ruggles et al., 2015). The 1860 Census of Population was conducted from June to October of 1860, before the election of 1860 and the start of the Civil War.³

The 1860 Census questionnaire for free people⁴ asked name, age, gender, place of residence, employment status, occupation, whether illiterate, marital status, children in the household, and country of birth (but not year of immigration for the foreign born), among other questions, with the census enumerator recording his impression of the person's race.⁵ The variables used in the analysis in this paper are described in the Statistical Appendix A.

Who Is (Probably) a Jew?

The decennial census has never asked for the religion of a respondent. The Census Office/Census Bureau has asked religion only twice, in an 1890 survey of 10,000 Jewish households (Billings, 1890) and in the March 1957 Current Population Survey (CPS) (US Bureau of the Census, no date, circa 1958b, and 1958a). Microdata files are not available from these two surveys. When the Census Bureau

²Occupation was first asked in the 1850 Census but for males only. Females were included starting with the 1860 Census. There were no questions on income or earnings until the 1940 Census.

³A fascinating report prepared for the observance of the centennial of the Civil War, "The United States on the Eve of the Civil War: As Described in the 1860 Census," is a condensed version of the "Preliminary Report of the Eighth Census" submitted in May 1862 to the US Senate by Joseph Kennedy, Superintendent of the Census. The Centennial edition notes: "The text of this little book is condensed from that report and is in Kennedy's own words" (US Civil War Centennial Commission 1863, pp. iii, vii, 1).

⁴There was a separate schedule with only a few demographic questions on slaves.

⁵Ferrie (1999) analyzes geographic mobility, occupation, and wealth of "a new sample of more than two thousand European immigrants who came to the United States during the 1840s" (Ferrie 1999, p.5). He constructed a sample of immigrants from passenger ship lists arriving in the port of New York during the 1840s and found them in the manuscript schedules of the 1850 and 1860 Censuses. This was combined with a sample of 4900 natives and immigrants present in the 1850 Census who were traced to the 1860 Census. He did not seek to identify Jews in his sample. Even if he sought to identify Jews, given the small proportion of Jews in the population, the number of Jewish observations would have been very small.

started asking the respondent's ancestry, all responses indicating a person's religion were combined into one category (code) to prevent the identification of a particular religion. Indirect techniques used to identify Jews in Census data, with various degrees of reliability, include whether the person speaks a distinctively Jewish language (Yiddish, Hebrew, or Ladino), has a distinctively Jewish surname, or is of Russian origin.⁶ Each of these techniques is subject to classification error, which varies across time.⁷ Of these, only the Distinctive Jewish Name (DJN) technique can be applied to the 1860 Census.

For the purposes of this study, two variants of the Distinctive Jewish Name technique are employed:

1. DJN Jews – Individuals with distinctive Jewish surnames (DJN) as reported in Sheskin (1998).⁸
2. Union Jews – Civil War Veterans of the Union Army eligible for pensions were asked at one point where and by whom they were married (Fogel et al. 2000).⁹ Those reporting a Jewish wedding (by a rabbi or in a synagogue), or otherwise were reported as Jewish, were coded as Jewish. Those with similar surnames in the 1860 Census are referred to as Union Jews, except for those with the surname Brown or Davis.

The list of names identified as “distinctively Jewish” is reported in Statistical Appendix A.

Either technique is subject to measurement error in estimating the difference in the characteristics between Jews and others. Given the very small proportion of Jews in the population, the measurement error in estimating the characteristics for non-Jews is likely to be very small. The measurement error in estimating the size of the Jewish population is likely to be large because of the large proportion of Jews whose surnames are not on a DJN list. If there is little difference in the characteristics of Jews depending on whether or not they have a DJN, the measurement error in their characteristics would be much smaller. If it is assumed that surname per se has no effect on one's socio-economic status, the measured difference between Jews and others is biased downward (toward zero), with the downward bias being smaller the smaller the proportion of Jews in the population.

⁶For a discussion of alternative techniques for identifying Jews in the absence of direct data or questions on religion or ethnicity, including the DJN method, see Sheskin (1998), Chiswick (2009), and Hartman and Sheskin (2013), and the references therein.

⁷The classification errors include missing Jews that do not satisfy these criteria and incorrectly including as Jews those who are not Jewish but satisfy these criteria.

⁸In an e-mail correspondence, Sheskin indicated: “The short list of names that was in the article in 1998 was developed at UJA (United Jewish Appeal) New York by looking at their mailing lists” (e-mail January 15, 2017 from Ira M. Sheskin to Barry R. Chiswick).

⁹Email from Christopher Roudize (Friday, April 21, 2017), Union Army Veterans Project, to Barry R. Chiswick discussing religion in the Union Army Veterans data.

Using these identifiers in the one-percent sample of the 1860 Census, there were 229 free Jewish men age 16–60 who reported an occupation, in contrast to the total sample of 67,503 men. They constituted about 0.3 percent of the sample. This procedure misses the unknown number of Jews who did not have a distinctively Jewish name (either from the DJN or Union Army list) and includes as Jews those non-Jews with such a name.

Occupational Distribution

The Minnesota Population Center coded the occupations reported in the 1860 Census manuscript records using occupational labels relevant for 1950. These occupations were then coded into the ten major occupation categories, as reported in Table 2.3, for free men age 16–60 years who reported an occupation in 1860. Table 2.3 reports the occupational distribution (and sample size) for all men, DJN Jews, Union Jews, and All Jews (surnames identified by either technique for identifying Jews).¹⁰

Table 2.3 Occupational distribution of men, age 16–60, 1860 census^a (Percent)

Occupation	All	All Jews	DJN Jews	Union Jews
PTK	3.2	2.6	1.7	3.2
Farmers	34.3	25.3	20.5	28.0
Managers	5.6	12.2	14.5	12.0
Clerical	0.6	0.9	0.9	0.8
Sales	2.8	6.6	11.1	3.2
Craft	17.7	21.0	20.5	21.6
Operatives	9.6	9.2	12.8	7.2
Service	1.5	0.9	0.9	0.8
Farm workers	12.7	5.7	6.0	4.8
Laborers	11.8	15.7	11.1	18.4
Total	100.0	100.0	100.0	100.0
Sample size	67,503	229	117	125

^aMen who reported an occupation. Excludes slaves. Excludes “Brown” and “Davis” from Union Jews. PTK is Professional, Technical and Kindred occupations, Farmers includes farm owners, farm tenants, and farm managers, Managers is limited to non-farm managers, Laborers is limited to non-farm laborers. Detail may not add to total due to rounding
Source: 1860 Census of Population, one-in-a-hundred, PUMS, Minnesota Population Center, University of Minnesota

¹⁰These occupational distributions for Jews and all men in the 1860 Census can be compared with occupational distributions for nearly every decade from 1890 to 2000 using a variety of Census and survey data, and a variety of techniques for identifying Jews (see Chiswick 1999, 2001, 2007). The proportion of Jews in the population reached a peak of just under 4 percent in the late 1930s, declining to 2 percent by 2000.

Table 2.3 reports DJN Jews have a greater representation in non-farm managerial, sales, and machine operator (operative) occupations than do Union Jews. All Jews have a greater representation in managerial, sales, craft, and non-farm laborer occupations than do all free men. Jews show a lower representation in farm occupations (as either farm owners, tenants, managers or farm laborers).

The sample sizes shrink considerably when the data are limited to German immigrants – by 91.7 percent for all men and by 68.1 percent for all Jews (Table 2.4). The German immigrant Jews show a greater representation in non-farm managerial and sales occupations and a lower proportion as farmers, farm workers, and laborers.

The detailed coding of occupations permits an examination of the Jewish presence in more narrowly defined occupations. Of the men under study, for all men, 15 percent of the PTK workers were in the Clergymen and Religious Worker occupations (333 out of 2168 in PTK). Although the sample size is very small for PTK Jews, none of the six was in those occupations. This is consistent with a relative scarcity of rabbis and other religious workers in mid-nineteenth century Jewish communities. On the other hand, among those in the sales occupations, the proportion reported as Hucksters and Peddlers among all men was 10.5 percent (201 out of 1920 in Sales). Jews in Sales were more heavily represented in Huckster and Peddler jobs (20 percent, 3 out of 15 in Sales).¹¹

Thus, the men identified as Jews by their surname were, compared to other free men, more heavily represented in white collar jobs, namely, non-farm managers and

Table 2.4 Occupational distribution of German-born men, age 16–60, 1860 census^a (Percent)

Occupation	All	All Jews	DJN Jews	Union Jews
PTK	1.9	4.1	4.2	3.1
Farmers	20.1	8.2	6.3	12.5
Managers	7.5	21.9	20.8	25.0
Clerical	0.4	1.4	2.1	0.0
Sales	3.6	9.6	12.5	6.3
Craft	28.0	23.3	22.9	25.0
Operatives	13.6	13.7	16.7	9.4
Service	2.3	2.7	2.1	3.1
Farm workers	7.5	1.4	2.1	0.0
Laborers	15.2	13.7	10.4	15.6
Total	100.0	100.0	100.0	100.0
Sample size	5610	73	48	32

^aMen born in Germany who reported an occupation. Excludes “Brown” and “Davis” from Union Jews. Detail may not add to total due to rounding

Source: 1860 Census of Population, one-in-a-hundred, PUMS, Minnesota Population Center, University of Minnesota

¹¹ In her historical analysis of Jewish peddlers in the nineteenth century, Diner emphasizes that itinerant peddling was largely an initial phase in the social, cultural, and economic integration into the economy for young Jewish immigrant men (Diner 2015).

sales occupations, and in craft occupations, and as non-farm laborers. They were under-represented as farmers and farm workers. The Jewish proportion was about the same as for all men in operative, service, and professional occupations. Note that the Jewish men were disproportionately foreign born, and were primarily recent immigrants.¹² As the Jewish men had experienced less time in the US labor market, it would be expected that their proportions in the least skilled occupations (especially as peddlers and laborers) would be higher compared to all free men.

Thus, the occupational patterns observed among Jews compared to all men in 1860 were quite similar to those found toward the end of the nineteenth and early twentieth centuries (See chapters 5 and 6, or Chiswick 2001, 2007).

Analysis of Occupational Status

This section presents the model used for the multiple regression analysis of the occupational status of the free men, age 16–60 years, who reported an occupation in the 1860 Census. The variables are described in more detail in Statistical Appendix A.

The Model:

The dependent variable is the natural logarithm of the Socio-Economic Index (SEI).

The detailed occupational responses recorded by the census enumerators were coded by the Minnesota Population Center (MPC) into the equivalent detailed 1950 occupational categories, and then assigned an SEI value (see Appendix A). The SEI is a measure of the status of the occupation based on the income level and educational attainment associated with each occupation in 1950. The natural logarithm is taken to adjust for the positive skewness in the SEI values.

The explanatory variables (with their hypothesized signs in parentheses) include:

Age (+) and Age-Squared (–), where age is a proxy measure for years of labor market experience. Occupational status is expected to increase more rapidly at first and then more gradually with additional labor market experience.

Illiterate (–) is used as the measure of labor market skills from education in the absence of direct data on schooling. An illiterate is defined as someone who cannot read or write in any language. This dichotomous variable takes the value of one for those who are illiterate.

¹²Of the men identified as Jews with an occupation, 44.1 percent were foreign born compared to 26.3 percent for all free men with an occupation. Although there are no direct data in the Census of 1860 on their duration in the US, data on immigration flows from the German states suggests they were fairly recent immigrants.

Race was classified based on the enumerator's assessment. Non-whites (–) (free Blacks, Chinese, etc.) are hypothesized to have a lower SEI, other variables the same.

Number of children (+) of the respondent living in the household is expected to be positively related to SEI. It includes own, step, and adopted children.

Married (+) men living with their spouse are hypothesized to have a higher SEI than men in other marital statuses for several reasons. These include the positive effect of a higher SEI on marital prospects, a greater specialization in labor market compared to household activities among married men, and the greater motivation for economic success among men supporting a wife given the very low labor force participation rate among married women. Only about 16 percent of all women, and 4 percent of married women, reported having an occupation in 1860.¹³

The Foreign Born (–) dichotomous variable is unity for men born outside a state or territory of the US. There are no data on when the immigrant came to the US, but the data on immigration flows (Table 2.2) suggests that most Jews were fairly recent arrivals and less likely to have been born in an English-speaking country. As they presumably have fewer skills relevant for the US labor market, including English proficiency, immigrants are expected to have a lower SEI.

Based on the location of the household and whether there was a farmer (owner, tenant, manager or laborer) in the household, respondents were classified as being Rural-Farm (–) or Rural-Non-Farm (–), compared to being urban. Two dichotomous variables are created. The rural residents are hypothesized to have a lower SEI, with those living on farms having a lower SEI than those who were non-farm residents.

South (?) is a dichotomous variable that distinguishes slave holding states from other parts of the US. While during the post-bellum period, until recent decades, earnings and socio-economic status were significantly lower in the south than for

¹³ Occupational Distribution of Free Women, Age 16–60, 1860 Census (Percent)

	All Women	All Jewish Women	Married Women	Married Jewish Women
Occupation, Non-Farm	14.5	15.7	3.8	2.0
Farm Occupation	1.4	0.8	0.5	0
Housewife and other no Occupation	84.0	83.5	95.7	98.0
Total	100.0	100.0	100.0	100.0
Sample Size	72,005	236	43,178	149

A woman with a response of “housekeeper” is counted as “housewife” if she is related to the head of the household.

Source: 1860 Census of Population, one-in-a-hundred, PUMS, Minnesota Population Center, University of Minnesota

Table 2.5 Means and standard deviations of the variables in the regression analysis, 1860 census^a

Variable	All	Jews		
		All	DJN Jews	Union Jews
Socio-Economic index	20.25723 (18.53789)	24.83406 (20.58888)	26.76068 (21.34069)	24.416 (20.45892)
Ln SEI	2.728545 (0.6952777)	2.91931 (0.7465524)	2.999067 (0.7563221)	2.899612 (0.7469547)
Age	33.25891 (11.50826)	32.78603 (11.00887)	32.88889 (10.96293)	33.024 (11.00034)
Age squared	1238.593 (843.7918)	1195.59 (791.2955)	1200.838 (796.7066)	1210.624 (789.8448)
Illiterate	0.063049 (0.243053)	0.0393013 (0.1947365)	0.034188 (0.1824935)	0.04 (0.1967478)
Non-white	0.0205324 (0.1418137)	0.0131004 (0.113954)	0.025641 (0.1587417)	0 (0)
Married (spouse)	0.5984178 (0.4902219)	0.6026201 (0.4904278)	0.5982906 (0.4923524)	0.616 (0.4883151)
Number of children	1.744471 (2.202758)	1.707424 (2.207838)	1.752137 (2.212449)	1.728 (2.230203)
Foreign born	0.2627587 (0.4401357)	0.441048 (0.4976002)	0.5213675 (0.5016918)	0.4 (0.4918694)
Rural farm	0.4516392 (0.4976594)	0.3362445 (0.4734586)	0.3076923 (0.4635236)	0.336 (0.4742396)
Rural non-farm	0.3069938 (0.4612502)	0.2925764 (0.4559422)	0.1880342 (0.3924201)	0.392 (0.4901613)
South	0.2659734 (0.4418534)	0.279476 (0.4497248)	0.2905983 (0.4559913)	0.272 (0.4467806)
Jews	0.0033924 (0.0581462)	1 (0)	1 (0)	1 (0)
Jews foreign born	0.0020147 (0.0448408)	0.441048 (0.4976002)	0.5213675 (0.5016918)	0.4 (0.4918694)
Sample size	67,503	229	117	125

^aMen with an occupation, age 16–60. Excludes slaves. Union Jews excludes “Brown” and “Davis” surnames. Standard deviations in parentheses

Source: 1860 Census of Population, one-in-a-hundred, PUMS, Minnesota Population Center, University of Minnesota

comparable men living in other regions of the country, it is not obvious that this would have been the situation in the ante-bellum period.

Descriptive Statistics Table 2.5 reports the descriptive statistics (means and standard deviation) for the variables used in the regression analysis.

The Duncan Socioeconomic Index (defined in Statistical Appendix A) is higher for Jews than for all free men age 16–60 years, Jews 24.8 compared to 20.3. Among Jews it is higher for DJN Jews (26.8) than for Union Jews (24.4). To provide a perspective on these SEI values, SEI has values of 19 for bartenders and carpenters, 20 for farm foremen, 21 for marshals and constables, 22 for shipping and receiving

clerks and bakers, 23 for tailors, and 27 for blacksmiths and stonemasons (see Appendix Table 2.8).

The men identified as Jews were about one-third of one percent of the free men (0.3 percent). They had about the same age (33 years), proportion married (60 percent), and number of own children living in the household (1.7 children). Among the men in these data, 2.1 percent of all free men were enumerated by the census taker as non-white, as were 1.3 percent of the Jews. The Jews were slightly less likely to be illiterate (3.9 percent illiterate compared to 6.3 percent illiterate for all free men), and less likely (by 11.5 percentage points) to be living on a farm and less likely to be living in a rural non-farm household (by 1.5 percentage points). Overall, 63 percent of the Jews lived in rural areas compared to 76 percent of all men. The Jews were far more likely to be immigrants – 44 percent were foreign-born compared to 26 percent for all free men.

The main differences between the Union Jews and the DJN Jews were the lower proportion of foreign born among the Union Jews (40 percent compared to 52 percent of the DJN Jews), the higher proportion of the Union Jews living on farms (34 percent compared to 31 percent) and especially in rural non-farm households (39 percent compared to 19 percent). Thus, 73 percent of Union Jews lived in rural areas compared to 50 percent of DJN Jews.

Regression Results Table 2.6 reports the regression results when the natural logarithm of the socio-economic index is regressed on the explanatory variables for all men, all Jews, DJN Jews, and Union Jews.¹⁴ The sample size for Jews is only 229 observations.

The statistical power of the equation is roughly the same for all men and for Jews, but because of the smaller sample size, the t-ratios of the explanatory variable are much lower among the Jews. The directions of the partial effects are the same for both groups, except for the foreign-born variable for Jews.

Standard partial effects are found. The socio-economic status for all free men and for Jews, among those 16–60 years, increases with age but at a decreasing rate, is greater among married men but is substantially lower for the illiterate and the small proportion non-white, lower for rural non-farm and especially lower for men in rural farm households. Two surprising results emerge. There is a small negative effect on the SEI score of the number of own children living in the household. And, other variables the same, the socio-economic index is greater among those, both Jews and all men, in the Southern states.

The foreign born coefficient is very small and positive (0.04) and not statistically significant ($t = 0.37$) among Jews, but it is much larger, negative (-0.28) and highly significant ($t = -46.6$) among all men, indicating a lower economic status, other variables the same, among the foreign born compared to the native-born free men. That is, being foreign born conveys a significant disadvantage among men in general, but this is not the situation among Jews.

¹⁴The natural logarithm of the SEI is used because of the positive skewness in the distribution of SEI scores.

Table 2.6 Regression analysis of LnSEI for men age 16–60, 1860 census^a

Variable	All	Jews		
		All	DJN Jews	Union Jews
Age	0.0429972 (29.23)	0.0052805 (0.18)	0.0046278 (0.11)	0.0082971 (0.21)
Age squared	–0.0004801 (–24.97)	0.0001128 (0.30)	0.0001916 (0.35)	–5.28e-06 (–0.01)
Illiterate	–0.3613149 (–35.78)	–0.1968142 (–0.84)	–0.0312692 (–0.09)	–0.3402819 (–1.03)
Non-white	–0.4010848 (–23.31)	–0.4651944 (–1.13)	–0.5444337 (–1.30)	^b
Married (spouse)	0.0932089 (14.13)	–0.2018224 (–1.52)	–0.1583462 (–0.83)	–0.2559029 (–1.37)
Number of children	–0.0095609 (–6.52)	–0.0022305 (–0.08)	0.0046936 (0.12)	–0.0022527 (–0.06)
Foreign born	–0.2770919 (–46.69)	0.04137 (0.37)	0.0553578 (0.33)	0.0088793 (0.06)
Rural farm	–0.6745308 (–102.95)	–0.601496 (–4.63)	–0.6717658 (–3.54)	–0.5953887 (–3.16)
Rural non-farm	–0.3672536 (–54.68)	–0.3539355 (–2.87)	–0.1301542 (–0.68)	–0.463995 (–2.63)
South	0.1006349 (17.95)	0.2406437 (2.32)	0.2927189 (2.06)	0.208535 (1.41)
Jews	0.0596462 (1.18)	^b	^b	^b
Jews foreign born	0.1905774 (2.91)	^b	^b	^b
Constant	2.347891 (95.05)	2.97084 (6.15)	2.835593 (3.98)	3.128806 (4.62)
Sample size	67,473	229	117	125
Adjusted R ²	0.1921	0.1509	0.2136	0.0782

^aMen with a socio-economic status score. Excludes slaves. Union Jews excludes “Brown” and “Davis” surnames. T-ratios in parentheses

^bVariable not entered

Source: 1860 Census of Population, one-in-a-hundred, PUMS, Minnesota Population Center, University of Minnesota

Other variables the same, the dichotomous variable for those identified as Jews is small, positive and not statistically significant (coefficient 0.06 and $t = 1.18$), however, the Jewish-foreign born interaction variable is positive and statistically significant (coefficient 0.19 and $t = 2.91$).¹⁵ That is, other variables the same, US-born Jews do not differ significantly in socio-economic index from US-born non-Jews, but Jewish immigrants have a statistically significant higher socio-economic index than white native-born non-Jews.

¹⁵When the interaction term is deleted from the equation, the coefficient on the Jewish variable is 0.19 with a t-ratio of 4.2. Thus, other variables the same, overall Jews have a higher SEI score.

Summary and Conclusions

Estimates indicate that the Jewish population of the US in 1860 number about 150,000 to 200,000, about one-half of one percent of the 27 million free people. Immigration, as well as Jewish immigration, had increased sharply in the 1840s and 1850s so that by 1860 about one-quarter of free men, but nearly half of Jewish men, were immigrants. The foreign-born Jewish men's origins were primarily from the German states.

This chapter has used the Public Use Microdata Sample (PUMS) from the 1860 US Census of Population, one percent sample of free people, to study the occupational distribution and the determinants of the socio-economic status (Duncan index) of Jewish men (age 16–60 years) compared to other free men. Earnings and year of immigration of the foreign-born were not asked in the 1860 Census. Jews cannot be identified directly, but since the PUMS file includes the respondent's surname, two versions of the Distinctive Jewish Name (DJN) technique are used to identify men with a higher probability of being Jewish.

The men identified as likely to be Jewish are more likely than other free men to be in non-farm managerial, craft, sales (especially as peddlers), and non-farm laborer occupations. They are less likely to be in farm related occupations (farm owners, managers, tenants, foremen or laborers) or work as clergy/religious workers.

Multiple regression analysis is used to study the Duncan Socio-Economic Index (SEI) of free men. Other variables the same, the SEI increases, at a decreasing rate, with age. It is also higher for free men who are literate, married, and living in the South. The SEI is lower among free non-whites (primarily free blacks) and among the foreign born, men with more children, those living in rural areas, and lower still among those living on farms.

Other variables the same, those identified as US-born Jews do not differ significantly in their SEI from other native-born white men. On the other hand, foreign-born Jews have a significantly higher SEI than even US-born white non-Jews.

Thus, a higher economic status is found among Jewish men compared to other white men living in the US in 1860.

Statistical Appendix A: Analysis of 1860 Census of Population

Definitions of Variables The variables used in the statistical analyses are defined below.

Data source: 1860 Census of Population, Public Use Microdata Sample, 1 percent free people sample, PUMS, Minnesota Population Center (MPC), University of Minnesota (2015)

Definition of population: 16–60 year old free males with an occupation according to the 1860 Census.(Table 2.7)

Table 2.7 Descriptive statistics for the variables used in the regression analysis

Variable	No. Observations	Mean	Standard Deviation	Minimum	Maximum
SEI	77,040	17.74953	18.59091	4	96
LnSEI	67,473	2.728545	0.6952777	1.386294	4.564348
Age	77,040	32.13564	11.74934	16	60
Illiterate	77,040	0.0588136	0.235277	0	1
Non-white	77,040	0.0213266	0.1444716	0	1
Spouse	77,040	0.5438474	0.4980769	0	1
Number of children	77,040	1.573079	2.148526	0	9
Foreign born	77,040	0.2484034	0.4320898	0	1
Rural farm	77,040	0.455932	0.4980575	0	1
Rural non-farm	77,040	0.3122015	0.4633945	0	1
South	77,040	0.272352	0.445173	0	1
Union Jews	77,040	0.0018951	0.043492	0	1
DJN Jews	77,040	0.0017523	0.0418245	0	1
Jewish	77,040	0.0034398	0.058549	0	1
Jewish foreign born	77,040	0.00196	0.044229	0	1

Source: 1860 Census of Population, one-in-a-hundred, PUMS, Minnesota Population Center, University of Minnesota

Dependent Variable Duncan Socioeconomic Index (SEI): This is a measure constructed by the Minnesota Population Center (MPC) that assigns an SEI score to each occupation using the 1950 occupational classification scheme (Duncan 1961). The SEI is a measure of occupational status based upon the income level and educational attainment associated with each occupation in 1950. The SEI variable is constructed using the individual responses to occupation, 1950 basis, from the 1860 Census data. The 1950 Census Bureau occupational classification system is applied to the occupational data, to enhance comparability across years. For pre-1940 samples created at MPC, the alphabetic responses supplied by enumerators were directly coded into the 1950 classification. See Appendix Table 2.8 for a list of selected occupations with their SEI values. Any laborer with no specified industry living in a household with a farmer is recoded into farm labor.

In the regression analysis, because of the positive skewness in the SEI distribution, the natural logarithm of the SEI is the dependent variables.

Explanatory Variables Age: This is the self-reported age of the respondent in years as of his last birthday.

Illiterate: This is a dichotomous variable that distinguishes individuals who are illiterate (cannot read or write in any language) from those who can read and write.

Non-white: This is a dichotomous variable that distinguishes individuals based on their racial origin, as categorized by the census enumerator. All individuals who were categorized as a racial origin other than “white” have been coded as “non-white” for this variable. Non-whites include Black/Negro, Mulatto, American Indian/Alaska Native, and Chinese.

Table 2.8 Socio-Economic Index (SEI) scores for selected occupations

Occupation ^a	SEI	Ln SEI
<u>PTK</u>		
Physicians & Surgeons (075)	92	4.52
Lawyers & Judges (055)	93	4.53
Clergymen (009)	52	3.95
<u>Farmers</u>		
Farmers (owners & tenants) (100)	14	2.64
Farm laborers (wage workers) (820)	6	1.79
<u>Managers</u>		
Managers (buildings) (230)	32	3.47
Officers, ships (240)	54	3.99
Officers & Administrators (nec), Public Administration (250)	66	4.19
Postmasters (270)	60	4.09
<u>Clerical</u>		
Bank Tellers (305)	52	3.95
Shipping and Receiving Clerks (342)	22	3.09
Clerical & Kindred Workers (nec) (390)	44	3.78
<u>Sales</u>		
Hucksters & Peddlers (430)	8	2.08
Real Estate Agents (470)	62	4.13
Salesmen & Sales Clerks (nec) (490)	47	3.85
<u>Craft</u>		
Bakers (500)	22	3.09
Carpenters (510)	19	2.94
Jewelers, Watchmakers (534)	36	3.58
Plumbers & Pipe Fitters (574)	34	3.53
Shoemakers & Repairers (except factory) (582)	12	2.48
Tailors (590)	23	3.14
<u>Operatives</u>		
Sailors & Deck Hands (673)	16	2.77
Boatmen, Canalmen, & Lock Keepers (623)	24	3.18
Deliverymen & Routemen (632)	32	3.47
Switchmen, Railroad (681)	44	3.78
Furnacemen (641)	18	2.89
<u>Services</u>		
Bartenders (750)	19	2.94
Janitors & Sextons (770)	9	2.20
Policemen & Detectives (773)	39	3.66
Cooks (except private household) (754)	15	2.71
<u>Laborers</u>		
Gardeners, except farm and groundskeepers (930)	11	2.40
Longshoremen & Stevedores (940)	11	2.40
Laborers (nec) (970)	8	2.08

(continued)

Table 2.8 (continued)

Occupation ^a	SEI	Ln SEI
<u>Range:</u>		
Highest SEI: Dentists (032)	96	4.56
Lowest SEI: Lumbermen, Raftsmen, & Woodchoppers (950) Porters (780)	4	1.39

^anec means not elsewhere classified. Occupation code number in parentheses
Source: 1860 Census of Population, one-in-a-hundred, PUMS, Minnesota Population Center, University of Minnesota

Spouse: This is a dichotomous variable that distinguishes men who were married with their spouse present from all others.

Number of Children: This variable counts the number of own children (of any age or marital status) residing with each individual. It includes step-children and adopted children as well as biological children.

Foreign Born: This is a dichotomous variable that was constructed to distinguish those with a birthplace outside the United States from individuals born in the United States. Birthplace was considered to be the United States if the respondent was born in a state or territory of the United States; all others were considered foreign born. Additional dichotomous variables were created for specific countries of birth.

Rural-Farm: This is a dichotomous variable that distinguishes individuals living in a rural and farm household from all others. The “rural” definition was applied ex-post by the 1940 Census Bureau, in which cities and incorporated places of 2500 inhabitants or more and townships or other subdivisions having a total population of 10,000 or more as well as a population density of 1000 or more per square mile were coded as “urban”; all other areas were considered rural. Any household that contained a person with the occupation “farmer” was coded as a farm household.

Rural-Non-Farm: This is a dichotomous variable that distinguished individuals living in a rural and non-farm household from all others. The “rural” definition was applied ex-post by the 1940 Census Bureau, in which cities and incorporated places of 2500 inhabitants or more and townships or other subdivisions having a total population of 10,000 or more as well as a population density of 1000 or more per square mile were coded as “urban”; all other areas were considered rural. Any household that contained a person with the occupation “farmer” was coded as a farm household; all others were considered non-farm.

South: This is a dichotomous variable that distinguishes all slave-holding states in 1860 from all other states. This list of states considered slave-holding in this distinction is: Delaware, Missouri, Virginia, Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Texas, Kentucky, Maryland, Tennessee, and the District of Columbia.

Union Jews: This is a dichotomous variable that distinguishes individuals whose surname was included on the list of individuals who were likely Jewish (based on reported religion whether they were married by a Rabbi or in a Synagogue) in the Union Army data (University of Chicago) from all others (Fogel et al. 2000). “Religion is only recorded in the Union Army data with marriage info. This can be

a marriage certificate, a widow's pension application, or the family circular (a long form about the soldier's family filled out in 1898 or 1912...). It also allowed me to add some soldiers married by rabbis that weren't explicitly labeled as Jewish" (E-mail from Christopher Roudiez, Center for Population Economics, to Barry R. Chiswick, Friday, April 21, 2017). The marriage records occasionally included the officiant's name and title. Although the surnames Brown and Davis were included on this list of Jews in the Union Army data, for this paper individuals with these surnames were not coded as part of the Union Jews variable. Surnames that were included are: Asch, Basch, Berwin, Bloomenthal, Blumenthal, Blumingthal, Bowers, Breslaum, Burgheim, Cahen, Cohen, Cohn, Cowan, Cowen, Dessan, Dessau, Dessaw, Desson, Hersch, Hess, Hirsch, Hirsh, Hurch, Hursh, Jessel, Kohn, Koff, Kopf, Lasalle, Levin, Lewin, Moses, Neuman, Newman, Newmann, Rosenthal, Rothschild, Stahl, Steinhard, Steinhart, Strauss, Uhlfeld, Vohlfeld, Walberg, Zoellner, Zollmer, and Zollner. For some individuals, the spelling of the surname varied over time and these various spellings were used.

DJN Jews: This is a dichotomous variable that distinguishes individuals with a surname that is considered a "distinctive Jewish name" from all others. For this variable, Jews are identified as individuals having a surname that is on a list of 36 DJNs in Sheskin (1998). These names are Berman, Caplan, Cohen, Epstein, Feldman, Freedman, Friedman, Goldberg, Goldman, Goldstein, Goodman, Greenberg, Gross, Grossman, Jacobs, Jaffe, Kahn, Kaplan, Katz, Kohn, Levin, Levine, Levinson, Levy, Lieberman, Rosen, Rosenberg, Rosenthal, Rubin, Schwartz, Shapiro, Siegel, Silverman, Stern, Weinstein, and Weiss.

Jewish: This is a dichotomous variable that distinguishes individuals who were likely Jewish from all others. Individuals were considered to be likely Jewish if they fell into either the DJN or Union Jews categories.

Jewish Foreign Born: This is a dichotomous variable that distinguishes foreign born individuals who were likely Jewish from all others. This variable uses the definitions of Jewish and foreign born as described above.

Occupational Category: This variable was constructed based on the occupation data, 1950 basis. The occupational categories used are as follows: PTK (Professional, Technical, and Kindred); Farmers (owners, tenants, and managers); Managers (non-farm); Clerical; Sales; Craft (including military and apprentices); Operatives; Service; Farm Workers for wages and farm laborers and fishermen; Laborers (non-farm); No Occupation; and, Not Applicable. Any laborer with no specified industry living in a household with a farmer is recoded into farm labor.

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Chapter 3

The Billings Report and the Occupational Attainment of American Jewry, 1890



Barry R. Chiswick

This chapter discusses the Billings Report, an 1890 survey and analysis of the vital statistics of the Jews of the United States conducted by the Census Office as part of the Eleventh (1890) Census of Population. After a discussion of the origin and nature of the Billings Report, the demographic characteristics of the Jews in the sample are presented. This is followed by a comparison of the occupational distribution of the Jewish respondents in the survey with the white population, by gender, from the 1890 Census. A summary and conclusion close the chapter.

The Billings Report

The nineteenth century was a period of intellectual ferment in the United States, with the establishment of modern social sciences. There was an intense interest in studying many facets of social, demographic, and economic life. The 1850 Census of Population is sometimes referred to as the first “modern” census with its emphasis, for the first time, on the individual rather than just the household, with an expansion in the questions asked, and with the more detailed publication of data. Later in the century the decennial census was further refined and the list of questions

This is a revision of the original article published in *Shofar: An Interdisciplinary Journal of Jewish Studies*, 19(2), Winter 2001, pp. 53–75. I appreciate the assistance I received in preparing this chapter from David Pemberton of the History Branch, U.S. Bureau of the Census, and Denise D. Meringolo, Curator, Jewish Historical Society of Greater Washington. I also value the research assistance of Abraham D. Chiswick and Hector Vielma. Very helpful comments on an earlier draft were received from Carmel U. Chiswick, Joseph Ferrie, Lloyd P. Gartner, and Evelyn Lehrer.

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expanded. Meanwhile, professional associations in the social sciences were developing as a response to the growing importance of these disciplines. The American Statistical Association was organized in 1839 and incorporated two years later, and the American Economic Association was organized in 1885. In the second half of the nineteenth century many states conducted special surveys, particularly with regard to the labor market, to supplement data available from the decennial census and other data sources.

Although data were being collected in the census and in various surveys on many population characteristics and for many demographic groups, there was a paucity of data on Jews. The decennial census has included information on race (or color) since its inception in 1790 and questions on country of birth since 1850, parent's country of birth from 1870 through 1970, and ancestry since 1980, but there has never been a question on the respondent's religion in the decennial census (US Bureau of the Census 1989).

Apparently, with the large increase in Jewish immigration in the 1880s it was felt that the absence of data on the adaptation of Jews in the United States was a serious deficiency. In 1890, the Division of Vital Statistics of the Census Office of the U.S. Department of the Interior conducted a survey of American Jewish families which "for the first time in the history of the census permits a comparison of certain characteristics in the vital statistics of this people in the United States" (Billings 1890, p. 1).¹ The report based on this survey is referred to as the Billings Report.

The Billings Report was also the last Federal government survey exclusively of Jews and, except for the March 1957 Current Population Survey, the last time the Census Office or its successor organization, the U.S. Bureau of the Census, asked the religion of individuals.²

The cover page of the Billings Report is a letter of transmission to the Secretary of the Interior. It is signed by Robert P. Porter, Superintendent of the Census (April 1889–July 1893). The report itself was published under the name of Dr. John S. Billings, "Surgeon, United States Army, In Charge of Vital Statistics." The sample selection and implementation of the survey were conducted by "Mr. A. S. Solomons, of Washington, D.C., who was appointed a special agent for that purpose."

The survey of the vital statistics of Jews in 1890 was just one of many activities in which Dr. John Shaw Billings, who was not Jewish, played a leading role in the development of the data and analysis of vital statistics during his long career in the

¹At that time "vital statistics"(data on fertility, marriages, morbidity, mortality, etc.) were the responsibility of the Census Office which was part of the Department of the Interior.

²Although many local surveys of Jews were conducted by Jewish communities, the next nationwide surveys may have been the 1970 and 1990 National Jewish Population Surveys. The Department of Health and Human Services frequently includes religion in its surveys on fertility and health status, and many non-government surveys (e.g., NORCs General Social Survey) include questions on religion. The samples of Jews in these surveys are usually small as Jews constitute a small proportion of the population of the United States, currently just over 2 percent.

U.S. government.³ Billings (1836–1913) received his medical degree in 1860 and shortly thereafter joined the Union army as a surgeon during the Civil War. He remained in U.S. government service for over three decades, primarily in the Surgeon General's Office, during which time he developed medical indices and medical libraries. He was involved in the development of Johns Hopkins Hospital and Medical School, among numerous other non-governmental activities. Among his many professional affiliations, Billings served as President of the American Public Health Association in 1880. His long-term interest in public health and vital statistics, and in particular the collection of statistics and the need for standardized reporting, resulted in his being a consultant to the Census Office for several Censuses (1880–1900). After he retired from the Army in 1895, Billings became the first Director of the New York Public Library, which was newly formed from the merger of three private libraries, the Astor, Tilden, and Lenox libraries, and remained in this post until his death in 1913.

The “Mr. A. S. Solomons, of Washington, D.C.” referred to in the Billings Report was Adolphus Simeon Solomons (1826–1910).⁴ He was a businessman (with U.S. government printing contracts), philanthropist, social welfare leader, and prominent member of the Jewish community, active primarily in Washington, D.C. and New York City. Solomons participated in the establishment of several hospitals. He was among the founders or early members of the American Association for the Red Cross, and its long time Vice President under President Clara Barton. He also served as Acting President of the Jewish Theological Seminary in New York City, among other activities. While the details of his participation in the survey of American Jews are not described in the available records, the combination of his contracts with the Federal government, in part through his publishing of government reports, his political connections in Washington, his established reputation in the health field through his various philanthropic activities, and his prominence in the American Jewish community, made him a public figure ideally suited to lend his name and expertise to promoting and implementing the survey. Given their common interests and their involvement with the Federal Government in Washington, Solomons and Billings undoubtedly knew each other prior to their working on the 1890 survey.

The first sentence of the text in the Billings Report indicates that it is a “preliminary report,” although there is no documentation that a final report was ever issued. The *Report of the Superintendent of Census to the Secretary of the Interior, 1890*, describing the activities of the Census Office, refers to this survey in two sentences:

Another special inquiry consists of the distribution of family schedules to several thousand Hebrew families throughout the United States, resulting in the return of over 10,000 sched-

³The biographical material on Billings is drawn from Billings (1965) and Lydenberg (1924).

⁴The biographical information on Solomons is drawn from Malone (1943), Goodman (1970), Adler and Szold (1904), and *Jewish Encyclopedia* (1925). I have not found a book-length biography of Solomons.

ules, from which some very interesting and valuable statistical matters concerning age and sex, occupation, marriages, births, and deaths of over 50,000 Hebrews have been compiled. This inquiry has been entirely completed and the final tables prepared. (Census Office, 1890, pp. 18–19).

This document refers to the completion of final tables from the survey, but is silent as to whether these are the tables in the Billings Report. The Billings Report may be the final report.⁵ A search of several archives suggests that the original questionnaires or copies of the raw data apparently no longer exist.

Note that the Billings Report refers to the population under study as “Jews,” but the Superintendent’s report refers to them as “Hebrews.” At this time the term “Hebrews” was the preferred designation used by the more assimilated Reform Jews, primarily of German origin, and by Christians, while the English Jews and the newly arrived Yiddish speaking immigrants from Russia and Eastern Europe preferred the designation “Jews.”⁶

The Billings report is quite explicit as to its purpose:

The data obtainable from the ordinary census registration records, even when these are fullest and most complete, do not materially assist in answering such questions with regard to the Jewish race, with the possible exception of those who have come to this country from Russia or Poland, since they do not reveal the religion of the individual either in the population schedules or in the local registration of births and deaths, as is done in Europe. [The study was made] for the purpose of determining the birth, death and marriage rate of members of the Jewish race who have been so long in this country that any special influences that may be supposed to have at least commenced to act upon them, in order to determine whether the important characteristics in the vital characteristics of this people which have been observed in Europe also exist in this country, or to what extent they have been modified by the new conditions of life here.⁷ (Billings, 1890, p. 3)

The survey “schedules” (questionnaires) for the Billings Report were sent out to the heads of about 15,000 married Jewish families, according to lists which he [Solomons] had

⁵Billings also published an article, “Vital Statistics of the Jews,” that appeared in the monthly periodical *The North American Review*, which was reprinted in *The American Jews Annual for 5653 AM*, (Billings 1894), the forerunner of the *American Jewish Year Book*. This article was based on the survey and the report. Unlike the Billings Report itself, the article had only a few short tables, with much of the statistical material reported in prose.

⁶Letter to author from Lloyd P. Gartner, Tel Aviv University, November 1, 1994. For a popular reference, see Ande Manners (1972).

⁷Care is required in understanding the term “race” in the nineteenth and early twentieth centuries. It was often applied to what today would be referred to as white ethnic groups, including Jews. Billings writes: “In the following paper the terms ‘Jewish race’ and ‘Jews’ are used to designate the people ordinarily so called, considered as the descendants of those who returned to Palestine after the Babylonian captivity, but without reference to their religious beliefs or practices. The terms ‘Hebrews’ and ‘Israelites,’ which are commonly used as synonyms for Jews, are not here employed, because they have a different historical significance” (Billings, 1891, p. 70). Yet in this same article Billings occasionally uses the term “Hebrews,” although he most often uses “Jews.” The “race” question in the census did not differentiate among white ethnic groups. For example the “race” question for each person in the 1890 Census was: “Whether white, black, mulatto, quadroon, octoroon, Chinese, Japanese, or Indian,” where Indian meant Native American (U.S. Bureau of the Census 1973).

obtained for that purpose from the presidents and rabbis of congregations in different parts of the country. These lists, as a rule, included only the names of families who had been in this country for five years or more. No attempt was made to obtain a complete census of the Jews, and it was fully explained in the circular letters issued with the schedules that the inquiry had no religious or commercial bearing.... In response to these inquiries returns were received from 10,618 Jewish families, including 60,630 persons living in the United States, December 31, 1889.⁸ (Billings, 1890, p. 3).

17-4881
Eleventh Census
of the
United States
Vital Statistics

DEPARTMENT OF THE INTERIOR,
CENSUS OFFICE,
WASHINGTON, D. C., December 30, 1889.

Dear Sir:

For the first time in the history of the Census Office of the United States it is desired to obtain accurate statistics of the vitality and longevity of the Jews residing in this country, and for that sole purpose a series of questions, which are not in any sense of a religious or mercantile character, have been prepared, which it is desired to have answered promptly.

To accomplish this, I have the honor to request that you will send me a list of the married members of your organization who have been in this country for five years or more, whereupon schedules, with circular letters, will be sent to each person direct from this office, together with return envelopes, which do not require postage.

All answers will be treated as strictly confidential, and the names of those responding will not in any manner be made public.

Your ready co-operation will be greatly appreciated.

Very respectfully,



Special Agent of Vital Statistics of Jews.

Exhibit 1 Letter from Adolphus Solomons to Presidents and Rabbis of Jewish Congregations*

*Courtesy of the Jewish Historical Society of Greater Washington

⁸The questionnaire, which apparently no longer exists, is not likely to have asked religion as the survey had "no religious ... bearing" and the Billings Report and his subsequent articles do not include any references to mixed Jewish/non-Jewish households or to non-Jews sampled in error.

A facsimile of the letter sent to the presidents and rabbis is reproduced as Exhibit 1.

Billings writes in *The North American Review* that there were then “a little over 7,000,000 persons in the world who might properly be called ‘Jews,’ and of these about 500,000 are living in this country. More than one-third of these last have arrived as immigrants from foreign lands within the last ten years, over 120,000 having arrived at the port of New York alone during the five years 1885-89” (Billings 1891, p. 70). Others have estimated there were 200,000 Jews in the U.S. in 1880 (0.4 percent of the total population) which, due primarily to immigration, increased to about 400,000 in 1888 (Goldstein, 1983, Table 3.1).⁹ Therefore, the survey involved a substantial sampling fraction, perhaps a one-in-five sample of the Jews in the United States for five or more years in 1890. Yet, given the sampling technique, it was not a random sample-unattached, unaffiliated, assimilated, intermarried and isolated Jews were more likely to be missed by the list method of sampling, but this is probably the best that could have been done at the time.¹⁰

The report consists of a one-page letter of transmittal and 21 pages, which includes 16 detailed tables and 4 “diagrams” (bar charts) accompanied by text explicating the tables and diagrams. It includes detailed cross-tabulated data on vital statistics (births, deaths, marriages) from January 1, 1885 to December 31, 1889, as well as detailed data on the age, sex, marital status, maternal nativity, occupation,

Table 3.1 Age distribution and country of birth of mothers by age, Jews, 1890^(a) (Percent)

Age	Percent	Country of birth of mother				Total
		U.S.	Germany	Russia/Poland	Other countries ^(b)	
0–15	31.9	42.2	35.0	11.9	11.0	100.0
15–25	23.5	20.1	57.2	9.9	12.8	100.0
25–35	14.9	10.2	65.1	10.1	14.6	100.0
35–45	12.3	6.3	67.3	10.8	15.6	100.0
45–55	9.1	3.8	71.6	10.4	14.2	100.0
55–65	5.1	2.0	76.5	7.4	14.1	100.0
65 & over	2.7	2.0	76.8	4.5	16.8	100.0
Unknown	0.4	13.2	52.1	16.0	18.7	100.0
All Ages	100.0	21.0	55.3	10.5	13.2	100.0

Source: Billings, John S., *Vital Statistics of the Jews in the United States*, Census Bulletin, No. 19, Census Office, Department of the Interior, Washington, D.C., December 30, 1890, Table II

^aJews living on December 31, 1889 who had been in the United States for five or more years as of that date

^bIncludes mother’s country of birth unknown (0.2 percent for all ages)

⁹Sachar reports a higher figure, 300,000 Jews by 1870 (1990, p. 185), while Gilbert indicates 300,000 Jews in 1880 (1992, p. 83).

¹⁰Similar problems exist in contemporary surveys of Jews. Many Jewish communal surveys conducted in the late twentieth century rely on the list sampling mechanism and mailing procedure. Even the random digit dialing technique used for telephone interviews in the 1990 and 2000 National Jewish Population Surveys tended to miss assimilated and isolated Jews.

fertility, and number of children of each member of that family living on December 31, 1889, as well as region of residence and the number of servants in the household. Tables also report the number of family members who were sick (by illness) or who belonged to “defective classes” (e.g., insane, blind, deaf, deformed). The greatest detail is presented on deaths and death rates over the five-year interval, which are reported by age, gender, marital status, maternal nativity, occupation, and cause of death. Comparisons are reported for death rates with the general population in some of the tables. Substantial comparisons are made in the text with the general population from the 1880 Census of Population, as the 1890 Census of Population data would not be available for several years.¹¹ No data are recorded in the Billings Report on education, literacy, or income. About two-thirds of the Jewish families had one or more servants and are therefore “presumed to have been in easy circumstances,” although the data on basic vital statistics did not vary with whether the family had none or one or more servants (Billings 1890, p. 5–6).

The data from the survey may well have been put on and processed using the newly developed Hollerith punch cards, the forerunner of the mid-twentieth century computer punch cards (IBM cards).¹² Hollerith attributes to a conversation with Billings in 1880 the idea that stimulated his development of a machine for tabulating and processing information. In an 1887 article Billings calls for the use of the new card-reading technology developed by Hollerith for work in census data and vital statistics. An 1890 report by the Census Office indicates the Hollerith punch cards were used for collecting data on mortality. The technology was therefore available and its use supported by Billings.

Demographic Characteristics of American Jews

The Billings Report concludes:

The latest summary of conclusions with regard to the vital statistics of the Jews in Europe... concludes that Jews have a less marriage rate, less birth rate and less death rate than their neighbors and this corresponds with the results obtained for Jews in the United States.... If the data as to births and deaths reported for the Jews in the United States were correct, they would indicate that the birth rate among them is decreasing and the death rate increasing with prolonged residence in this country.... [I]t is evident that the Jews in the United States preserve many of the peculiarities which have been noted among them in Europe, and that more extended and reliable data with regard to their birth and death rates in this country are highly desirable. (Billings, 1890, p. 19).¹³

¹¹ Unfortunately, most of the original manuscript records from the 1890 Census of Population were destroyed in a fire (see Blake 1996). As a result, it has not been possible to create modern computer data files of random samples from the 1890 Census, as has been done by now for nearly all of the other Censuses since 1850.

¹² See Billings (1965), Census Office (1890), and Lydenberg (1924).

¹³ So, even in 1890, the last sentence in a social science report was a call for more and better data and more research.

The Billings Report provides very limited information on the nativity and origins of the population. It is implicit that all of the families and respondents are Jewish.¹⁴ The only information on both the nativity and duration in the United States of the sample is presented in one sentence.¹⁵ Converted to percents, of the 10,618 family heads, 12.5 percent were native born and 77.8 percent were immigrants who had been in the U.S. for 15 or more years, 2.1 percent had been in the U.S. 10–15 years, 5.2 percent from 5 to 10 years, 1.2 percent less than 5 years, and period of immigration was not known for another 1.2 percent. The small proportion in the United States less than five years, in spite of the large Jewish immigration in that period, was purposeful. Recall that the intent was to survey only respondents who had been in the United States for at least five years as of December 31, 1889. Thus, over 90 percent of the family heads in the survey were in the United States prior to the large-scale immigration of Eastern European Jews that began in 1881.

Among all age groups in the sample, 32.8 percent were foreign born, 60.6 percent were born in the U.S. with one or both parents foreign born, and only 6.4 percent were native born with native-born parents (Billings, 1890, Table 3.3). More information on the specific origins is provided in the Billings Report table on maternal nativity by the sex and age of the respondent (Table 3.1). Among all age groups, 21.0 percent had mothers born in the United States, 55.3 percent in Germany, 10.5 percent in Russia and Poland, 2.9 percent Bohemia, 2.4 percent Hungary, 2.0 percent England and Wales, 1.1 percent France, 4.5 percent other countries, and for 0.2 percent the mother's foreign country of birth is unknown. Among the working age population, that is, those age 15 and over, fewer had mothers born in the United States (only 9.8 percent), but for two-thirds (66.2 percent) their mother was born in Germany, with another 15.8 percent reporting Russia and Poland, and 8.2 percent reporting other origins. In general, the older the cohort of respondents the larger the proportion with German-born mothers.

Overall, the sex ratio of the respondents was 109.5, that is, there were 109.5 males for every hundred females (Billings 1890, Table 3.3). This ratio varied sharply by age, as it was 102.9 for those under age 15 (reflecting the larger number of boys than girls born in the population), 102.2 for ages 15 to 45, 151.6 for those age 45 and over, 170 for those age 55 to 74. The high ratio of males to females among those age 45 and older reflects differential female mortality related to child bearing and a greater tendency toward individual rather than family migration of the

¹⁴Although data were not collected as to the cultural origins of the Jews, based on maternal birth-place Billings writes: "The great majority are undoubtedly of the Ashkenazim from Northern Europe, and there were very few families among them of the Sephardim, or Spanish Jews" (Billings 1891, p. 73).

¹⁵"Of these 10,618 families the heads of 1332 were native born; 8263 had been in the United States fifteen years and over, 221 from ten to fifteen years, 552 from five to ten years, 128 under five years, and for 124 the period of residence in the United States was unknown." (Billings 1890, p. 5). No explanation is offered for the sum of the categories exceeding the total by two family heads.

mid-nineteenth-century German Jewish immigrants compared to the late nineteenth-century Eastern European Jewish immigrants (Sachar 1990). Also given the life expectancy at the time, fewer men and women lived long enough to reach the older ages for which it appears women may have a biological advantage.

The first table in the Billings Report classifies the Jewish families by region of residence and the number of servants to present data on basic demographic events (i.e., marriages, births, deaths) and family size during the five years under study (Billings, 1890). The limited detail on region of residence in the Billings Report precludes a strict comparison with the population for the country as a whole. The data suggest, however, a greater geographic concentration among the respondents than among the population as a whole in 1890, but less than the geographic concentration of Jews by the end of the large scale East European Jewish immigration.¹⁶ Twenty-three percent of the Jewish population in the Billings Report lived in the “Metropolitan District,” that is, “New York, Brooklyn and the immediate vicinity.” (Billings 1890, p. 4–5; Billings 1891, p. 71). Billings indicates that the data by region were “compiled separately, in order to determine any differences due to

¹⁶The geographic concentration of the Jewish population in the Billings Report compared to the United States population, 1890:

Billings Report – Jewish population		Census of 1890 drainage basin regions – US population	
Region	Percent	Region	Percent
Eastern States	5.1	New England Coast	7.2
Metropolitan District	22.8	Mid-Atlantic Coast	18.3
Atlantic Coast	13.6	South Atlantic Coast	6.8
Region of Lakes & Interior	25.5	Great Lakes	11.2
River Belt	12.8	Gulf of Mexico	52.7
Southern States & Gulf of Mexico	13.6	Great Basin	0.4
Extreme Western States & Pacific Coast	6.6	Pacific Ocean	3.4
Total	100.0		100.0

Note: Detail may not add to total due to rounding.

The regional classifications of the country differ in the Billings Report and the 1890 Census, and differ from those currently used. The Billings’ River Belt refers to the states along the Mississippi River north of the states along the Gulf of Mexico. The Census Office Drainage Basin refers to where the rivers drain. Jews were relatively more highly concentrated in the greater New York City area (Metropolitan District / part of the Mid-Atlantic Coast) and in the industrial areas in the mid-west (Region of Lakes and Interior / Great Lakes), but were to be found in all of the regions of the country.

Source: Billings (1890), Billings (1891), and Census Office (1892).

climate,” and that no marked regional differences in characteristics were found (Billings 1891, p. 71).

Labor Market Characteristics

Data are not available in the survey on modern labor force concepts, such as employment, unemployment, and absence from the labor force. Data are available, however, on the number “engaged” in a gainful occupation, which is close to the current concept of employed. It appears that Jews were less likely to report they were engaged in an occupation, and this is particularly so for Jewish women.¹⁷ Among the Jewish men age 15 and over, 83 percent reported they were engaged in an occupation, in contrast to 87 percent for white native-born men and 94 percent for white foreign-born men (Table 3.2).¹⁸

Among the women the proportions engaged in an occupation were 7 percent for Jewish women, 15 percent for white native-born women and 20 percent for white immigrant women. Among the younger group of women, age 15–45, the Jewish participation rate of 8 percent was far below the 17 percent and 27 percent,

Table 3.2 Persons reporting they are engaged in an occupation by Sex and Age, Jews and the White population, Age 15 and Over, 1890^a (percent)

Sex and Age		Jews	Foreign born	Native born	All
Males:	15–45	81.4	96.5	85.5	87.8
	45 and over	85.3	89.4	90.0	89.8
	15 and over	82.5	93.9	86.5	88.3
Females:	15–45	8.2	26.5	17.2	18.9
	45 and over	2.4	9.2	9.2	9.2
	15 and over	7.0	19.9	15.3	16.3

Source: Billings, John S., *Vital Statistics of the Jews in the United States*, Census Bulletin, No. 19, Census Office, Department of the Interior, Washington, D.C., December 30, 1890, Tables III and IV *Report on Population of the United States at the Eleventh Census: 1890, Part II*, Census Office, Department of the Interior, Washington, DC., U.S. Government Printing Office, 1897, p. 122

^aThe data for Jews are for those living on December 31, 1889 who had been in the United States for five or more years as of that date. The data for whites are from the 1890 Census of Population

¹⁷ This is consistent with a pattern of lower labor supply among Jewish women, in particular married women with children, observed among the more Orthodox turn-of-the-century Eastern European Jewish immigrants and later in the twentieth century. See Glenn (1990) and Chiswick (1997).

¹⁸ Few youths age 15 and over were enrolled in school in 1890. The data on the gainful employment of all white men and women are from the published tables from the 1890 Census of Population. See Census Office (1897).

respectively, for white native-born and white foreign-born women. It is not clear, however, to what extent women who worked in family-owned enterprises were reported as engaging in a gainful occupation. This measurement issue would be more serious for Jewish women because of the greater propensity of their husbands and fathers to own small businesses.

Table 3.4 of the Billings Report, which is reproduced in Appendix A of this paper, presents data separately by sex and age group on the occupational distribution of the Jewish respondents, using the same occupational categories as in the 1880 Census of Population. Appendix B indicates how these detailed occupational categories were recoded for this paper into the standard nine occupational groups that are in common practice today. Appendix C reports how the detailed occupational categories in the published volume of the 1890 Census of Population were collapsed into nine broad occupational categories. The intent in Appendices B and C is to create broad occupational categories with as great a degree of comparability as possible across the two data sources and comparability across time with later data on Jewish occupational attainment.¹⁹ This task was made that much more difficult

Table 3.3 Occupational distribution of adults Jews and Whites, by Sex, 1890 ^(a)

Occupation ^(b)	Males			Females		
	Jews	Whites		Jews	Whites	
		Foreign born	Native born		Foreign born	Native born
Prof/Tech	4.6	1.4	3.2	18.7	2.3	13.1
Managerial	2.8	7.1	6.2	0.6	1.4	1.1
Clerical	19.5	3.1	5.8	21.8	10.4	5.3
Sales	56.7	1.8	2.1	21.1	1.0	2.6
Service	0.7	2.6	2.0	0.8	4.6	4.2
Craft	11.5	19.8	13.1	23.2	11.4	18.3
Operative	NA	19.6	12.4	NA	16.0	14.7
Laborer	0.5	19.7	9.0	13.1	57.5	30.0
Agriculture	2.1	24.9	46.2	0.7	4.5	10.9
Not reported	1.7	–	–	0.0	–	–
	100.0	100.0	100.0	100.0	100.0	100.0

^aThe data for Jews are for those living on December 31, 1889 who had been in the United States for five or more years as of that date. The data for whites are from the 1890 Census of Population

^bLaborers excludes farm laborers but includes servants. Agriculture includes farm laborers
NA: Not separately identified in the occupational categories.

Source: Billings, John S., *Vital Statistics of the Jews in the United States*, Census Bulletin, No. 19, Census Office, Department of the Interior, Washington, D.C., December 30, 1890, Table IV.
Report on Population of the United States at the Eleventh Census: 1890, Part II, Census Office, Department of the Interior, Washington, DC., U.S. Government Printing Office, 1897, p. 118 and 119.

¹⁹The comparison of the occupational distributions of Jewish and white non-Jewish men from 1890 to 1990 can be found in chapter 5 or Chiswick (1999).

by the limited number of categories and the different classification system used in the survey of Jews. Table 3.3 reports the occupational distributions of Jewish men and women in the 1890 Billings Report and white men and women in the 1890 Census (of whom 99 percent were not Jewish), computed from Appendices A, B, and C.

Jewish men in the United States in 1889, who had been in the United States at least five years, were highly concentrated in sales occupations (56.7 percent), which included commercial travelers and peddlers, very important occupations among German Jews (Sachar 1990).²⁰ Clerical jobs were also important (19.5 percent). In contrast to the 76.2 percent in sales and clerical jobs among Jewish men, these occupations employed 7.9 percent of native born white men and 4.9 percent of foreign-born white men.

Among the Jewish men, 4.6 percent were in professional occupations, in contrast to only 3.2 percent of native-born white men and 1.4 percent of foreign-born white men (Table 3.3). Thus, although the proportion in professional occupations was very low by modern standards, the proportion was greater among Jews than among other white men. In the Jewish male sample of professionals, over one-half were lawyers and doctors, that is, 33.7 percent were lawyers, and 20.4 percent were physicians and surgeons, while 45.9 percent were in other professional categories, which would include clergyman, government officials, musicians, and teachers (Billings 1890).

Although agriculture employed nearly half of native-born white men (46.2 percent) and nearly one-quarter of foreign-born white men (24.9 percent), it was a trivial sector (2.1 percent) for the Jews in the sample. Non-farm blue-collar occupations (that is, craft, operative, service and laborer occupations) were much less important for Jews than others. Yet, even among the blue-collar categories, the Jewish men were more likely than non-Jews to be in the craft jobs, the highest-skilled category in the blue-collar group.

Jewish women reporting they were engaged in an occupation were not as concentrated in sales and clerical occupations as Jewish men, yet the 21.8 percent and 21.1 percent, respectively, far exceeded those for white women in general. The extent of under-reporting for women working in sales and clerical jobs in family-owned businesses is, of course, not known. This would be a more serious measurement problem for women among Jews than among non-Jews because of the greater propensity for Jewish men to own such businesses. Jewish women were also highly represented in craft and professional (teaching) occupations, and substantially under-represented in the lowest-skilled occupational groups (agriculture, service, laborer, and servant) in comparison with other white women. Most of the 18.7 percent of Jewish women engaged in a professional occupation were teachers; of those in professional occupations 65.6 percent were teachers, 22.0 percent were “musicians and teachers of music,” and only 12.4 percent were in all other professional job categories (Billings 1890).

Summary and Conclusions

This chapter is concerned with a study of Jews in the United States conducted in 1890 by the United States Census Office, referred to as the Billings Report. The paper discusses the motivations behind the survey and report, and the two individuals most associated with the project, Dr. John Shaw Billings and Adolphus S. Solomons. The Billings Report was based on a mail survey of over 10,600 Jewish families, nearly all of whom were in the United States for 5 or more years at the time of the survey. The sample was obtained from lists provided by rabbis and presidents of Jewish congregations.

The respondents were predominantly German Jews. Over three-quarters of the family heads were foreign born, and two-thirds of the working age (age 15 and over) respondents reported Germany as their mother's birthplace.

Labor force participation was lower among the Jews than among the general white population. In the Billings Report data, 83 percent of the Jewish men age 15 and over were "engaged" in an occupation, compared to 89 percent among all white men in the 1890 Census. Participation rates were very low among women, in particular, for Jewish women. Seven percent of the Jewish women reported being engaged in an occupation, in contrast to 16 percent for all white women.

The Jewish men in the sample who reported an occupation were primarily in sales (57 percent) and clerical (20 percent) occupations, in contrast to only 8 percent in both of these occupations combined among the white native-born men and 5 percent among the white foreign-born men in the 1890 Census. Among the Jews engaged in blue-collar occupations, the higher-skilled craft jobs predominated. Most white native-born and foreign-born men at the time were in agriculture and lower-skilled blue collar non-farm jobs.

The Jewish women had a broader occupational distribution in which many were employed in sales (22 percent), clerical (21 percent), craft (23 percent) and teaching (19 percent) jobs. Relatively few were in the agricultural and servant jobs so prevalent among other white women.

Thus, the Billings Report provides systematic data that indicate that the Jewish population of the United States in the mid-1880s was primarily of German origin and primarily employed in white-collar occupations. Those in blue-collar occupations were more likely to have a craft skill than other whites in blue-collar jobs. Although the demographic origins of the American Jewish population were soon to change dramatically with the large-scale immigration from Eastern Europe, the pattern of white collar and skilled employment among Jews had already been established in the United States.

²⁰ Billings comments on the higher proportion of births among the Jews than among others in June and December–January in the 5 years under study (1885–1889). The implication is a higher proportion of conceptions in April and September. He reports that in these five years the average date for Passover (presumably the first day) was April 14 and for the Jewish New Year, September 18. The return home during these important holidays of the Jewish merchant/peddler husbands, who were often away for long periods of time, could account for this seasonal pattern. Although the different seasonal pattern in births is mentioned only in passing in Billings (1890, p. 10), the data are reported and discussed in Billings (1891, p. 37).

Appendix A: Billings Report Table on Occupational Attainment

Table 3.4 Showing separately for each sex the number engaged in certain occupations and classes of occupations

Occupations	Age				
	All ages	Under 15	15 to 45	45 and over	Unknown
Total Males population- All occupations	18,115	84	12,656	5272	103
Class A – Total	846	...	645	197	4
Lawyers	285	...	236	48	1
Physicians and surgeons	173	...	138	33	2
Others of this class	388	...	271	116	1
Class B – Total	6112	47	4654	1386	25
Accountants, bookkeepers clerks, and copyists	3081	40	2858	174	9
Bankers, brokers and officials of companies	422	...	249	168	5
Collectors, auctioneers, and agents	424	1	220	201	2
Wholesale merchants and dealers	2149	2	1296	812	9
Others of this class	36	4	31	1	...
Class C – Total	8115	11	5516	2825	63
Commercial travelers and salesmen	1802	5	1573	214	10
Dealers retail	5982	5	3528	2398	51
Hucksters and peddlers	171	...	102	67	2
Wine and liquor dealers (retail)	176	...	115	61	...
Wine and liquor dealers (wholesale)	185	...	113	72	...
Others of this class	99	1	85	13	...
Class D					
Hotel and boarding-house keepers, saloon keepers, etc. – Total	82	...	48	34	...
Class E					
Barbers, janitors, launderers, nurses, policemen, soldiers, undertakers, etc. – Total	118	...	78	40	...
Class F					
Laborers, messengers, and servants – Total	84	12	63	8	1
Class G – Total	2075	12	1398	656	9
Butchers	285	0	182	99	4

(continued)

Table 3.4 (continued)

Occupations	Age				
	All ages	Under 15	15 to 45	45 and over	Unknown
Cigar makers and tobacco workers	186	3	140	43	
Clock and watch repairers, jewelers and opticians	388	1	258	129	
Compositors, printers, pressmen	119	1	102	16	
Tailors	538	4	33	199	2
Others of this class	559	3	383	170	3
Class H – Total	383	2	254	126	1
Farmers, planters and overseers	111	...	78	33	...
Stock-raisers, herders, and drovers	135	1	70	63	1
Others of this class	137	1	106	30	...
Females					
Total population – All occupations	1382	24	1247	99	12
Class A – Total	259	...	249	10	...
Musicians and teachers of music	57	...	54	3	...
Teachers	170	...	163	7	...
Others of this class	32	...	32	...	...
Class B – Total	301	6	290	5	...
Stenographers and typewriters	67	...	67	...	...
Accountants, bookkeepers, clerks, and copyists	220	6	213	1	...
Others of this class	14	...	10	4	...
Class C – Total	291	6	249	33	3
Saleswomen	215	5	205	4	1
Dealers not specified (retail)	57	1	35	19	2
Others of this class	19	...	9	10	...
Class D – Total	8	...	2	6	...
Class E – Total	11	1	7	3	...
Class F – Total	181	2	150	21	8
Servants	178	1	148	21	8
Others of this class	3	1	2	...	...
Class G – Total	321	9	291	20	1
Milliners	110	1	102	6	1
Dressmakers	111	...	102	9	...
Others of this class	100	8	87	5	...
Class H					
Farmers, planters, stock-raisers, etc. – Total	10	...	9	1	...

Source: Billings, John S., *Vital Statistics of the Jews in the United States*, Census Bulletin, No. 19, Census Office, Department of the Interior, Washington, D.C., December 30, 1890 Table IV.

**Appendix B: Conversion of Occupational Categories
in the Billings Report Into the Nine Broad
Occupational Classifications**

Occupations	Males	Females
Prof/Tech	Lawyers; Physicians and surgeons; Others in Class A	Teachers; Musicians and teachers of music; Others in Class A
Managerial	Bankers; Officials of companies; Hotel keepers, etc. (Class D)	Class D
Clerical	Accountants; Collectors; Others in Class B	Stenographers and typewriters; Accountants, Bookkeepers, Clerks and copyists; Others in Class B
Sales	Wholesale merchants; Salesmen; Dealers (retail and wholesale); Hucksters; Others in Class C	Saleswomen; Dealers not specified (retail); Others in Class C
Service	Barbers, Janitors, Launderers, Nurses, Policemen, Soldiers, Under takers, Others in Class E	Class E
Craft	Butchers, Cigar makers and Tobacco workers; Clock and watch repairers; Jewelers and opticians; Compositors, printers, pressmen; Tailors, Others in Class G.	Milliners, Dressmakers, Others in Class G
Operative ^a	...	...
Laborer (excl. Farm laborers) and Servant	Laborers, Messengers, and Servants (Class F)	Servants; Others in Class F
Agriculture (incl. Farm laborers)	Farmers, Planters and overseers; Stock-raisers, Herders and drovers, Others in Class H	Farmers, Planters, Stock-raisers, etc. (Class H)

^aOperative not separately identified in the Billings Report.

**Appendix C: Conversion of Occupational Categories
in the 1890 Census Into the Nine Broad
Occupational Classifications**

Occupation	1890 Census occupational categories
Males	
Prof/Tech	Clergyman; Lawyers, Physicians and surgeons; Officials (government), Professors and Teachers

(continued)

Occupation	1890 Census occupational categories
Managerial	Hotel and boarding/lodging house keepers; Restaurant and Saloon keepers; Bankers, brokers and officials of banks; Merchants and dealers; Builders and contractors; Manufacturers and officials of manufacturing companies
Clerical	Agents (real estate, insurance, etc.) bookkeepers and accountants: Clerks, copyists, stenographers, typewriters.
Sales	Commercial travelers; Hucksters and peddlers, Salesman
Service	Barbers and hairdressers; Bartenders; Watchman, Policemen, Detectives; Hostlers and livery stable keepers; Messengers, packers and porters
Craft	Bakers; Blacksmiths and wheelwrights; Boot and shoe makers and repairers; Brick and tile makers and terra cotta workers; Cabinet makers and upholsterers; Carpenters and joiners; Coopers; Machinists; Marble and Stone cutters; Masons (brick and stone); Millers (flour and grist); Painters, glaziers, and varnishers; Plasterers; Plumbers and gas and Steam fitters; Printers and compositors; Saw and planning mill employees, etc.; Tailors; Woodworkers (not otherwise specified)
Operative	Miners and quarrymen; Engineers and fireman (non-locomotive); Boatmen, Canalmen, Pilots and Sailors; Steam railroad employees (incl. locomotive engineers and fireman); Telegraph and Tele phone operators; Apprentices; Butchers; Cotton, Woolen and other textile mill operators; Harness, Saddle, Truck, Valise, Leather case and pocketbook makers; Iron, steel, and other metal workers; Leather couriers, dressers, finishers and tanners; Tobacco and Cigar factory operatives
Laborer (excl. Farm laborers) and Servant	Gardeners, florists, nurserymen, and vine growers; Lumberman, raftsmen, and wood choppers; Fisherman and Oystermen; Laborers; Servants
Agriculture (incl. Farm laborers)	Agricultural Laborers; Farmers, planters and overseers; Stock raisers, herders, drovers.
Females	
Prof/Tech	Professors and teachers; Musicians and teachers of music
Managerial	Boarding and lodging housekeepers
Clerical	Bookkeepers; Clerks, stenographers, typewriters
Sales	Saleswomen
Service	Housekeepers and Stewardesses; Nurses and Midwives
Craft	Boot and shoe makers and repairers; Dressmakers; Milliners; Tailoresses
Operative	Cotton, woolen and other textile mill operators; Seamstresses, etc.; Tobacco and Cigar factory workers
Laborer (excl. Farm laborers) and Servant	Laborers, Laundresses, Servants
Agriculture (incl. Farm laborers)	Agricultural laborers; Farmers, planters and overseers

Source of 1890 Occupations: *Report on Population of the United States at the Eleventh Census: 1890, Part II*, Census Office, Department of the Interior, Washington, DC, U.S. Government Printing Office, 1897, pp. 118–119, Tables not numbered.

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Chapter 4

Jewish Immigrant Skill and Occupational Status at the Turn of the Century



Barry R. Chiswick

Introduction

Most contemporary American-born Jews are the descendants of immigrants from Russia who came to this country during the four decades from 1881 to the early 1920s.¹ The assassination of Czar Alexander II in early 1881 was quickly followed by a series of major pogroms and an increase in generalized overt antisemitism stimulated by the Russian government. The migration was curtailed by World War

Revision of the original article published in *Explorations in Economic History*, 28(1), January 1991, pp. 64–86. I appreciate the comments received on earlier drafts from Carmel U. Chiswick, William Bridges, Leonard Dinnerstein, Walter Kamphoefner, Barry Kosmin, James Oberly, Lawrence Officer, Paul Ritterband, and two anonymous referees, as well as Stephen N. Graham's assistance in using the 1900 Census of Population. I also appreciate Xiao-Bo Li's research assistance. An earlier version of this paper was presented at the annual meetings of the Social Science History Association and the Association for Jewish Studies, as well as at the Department of Economics, Hebrew University, Jerusalem. Financial support for this project was provided, in part, by a grant from the Sloan Foundation for immigration research.

¹ Kuznets (1975, p. 120) concludes that "Total Jewish population in the United States in 1880 was estimated at 250 thousand. Obviously the inflow in the following three and half decades of two million Jewish immigrants, three quarters of them from Tsarist Russia and most of the rest from other countries in Eastern Europe, radically changed not only the magnitude but also the structure of United States Jewry." He goes on to note that as of 1950, "probably no less than" 60% of American Jews were the descendants of these Russian Jewish immigrants (Kuznets 1975, p. 120).

During the period of the mass immigration from Southern and Eastern Europe (1881–1914), Jews were 9.4% of the 21.9 million immigrants, while during the first half of this period (1881–1898) they were 7.0% of the 8.2 million immigrants. Of the Jewish immigrants (1881–1914), 76% were from Tsarist Russia, 19% from Austria-Hungary, 4% from Romania, and 2% from all

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I, and then ended by a combination of the introduction in the 1920s of quotas to restrict East European immigration and barriers to emigration imposed by the new regime in Russia. The Jewish immigration during this period is best characterized as a mass refugee movement.² Their descendants, contemporary American Jews, are among the most successful minorities in the United States.³

This chapter provides a systematic analysis of the turn-of-the-century immigrant labor market experience, focusing on Jewish immigrants, using previously unavailable data. In so doing it provides insights into the adaptation of the Jewish immigrants and the impact this may have had on their descendants. Although there has been much anecdotal writing on the turn-of-the-century Jewish immigrant labor market experience, there has been relatively little systematic empirical research.⁴

A microdata file recently created from the 1900 Census of Population manuscripts is analyzed using modern statistical techniques. The chapter begins by describing the data, the definition of Jewish immigrants, and the dependent variable in the analysis,

other countries (Kuznets 1975, Table 4.1, p. 39). Kuznets estimates that during the period 1881 to 1898 two-thirds of the Tsarist Russian immigrants were Jews (Kuznets 1975, Table 4.2, p. 43).

Both Kuznets (1975) and, using a different methodology, Rosenthal (1975) conclude that Russian origin is a good proxy for identifying Jews in the population at the turn of the century and in later decades.

²Kuznets (1975, Table 4.5, pp. 50–51) and Vallee (1988) estimate that on average the annual rate of migration of Russian Jews to the United States from 1881 to 1914 was about 1.4 per hundred population. The proportion of Russian Jews emigrating is even higher considering the not insubstantial migration to other areas, including Britain, Germany, Canada, South Africa, and Palestine. Kuznets reports the findings of several studies indicating that 20 to 25% of Russian Jewish emigrants went to other parts of Europe (10–12%) or other areas of overseas settlement (7–15%) (Kuznets 1975, Table 4.4, p. 49.). Vallee (1988) also demonstrates the sensitivity of Jewish rates of emigration from Russia to the United States to economic conditions in both countries and to political instability and anti-Semitic events in Russia.

The Dillingham Immigration Commission (1911) commented that the “Hebrews” (Jews) were the second largest immigrant group, after the Italians, and that they were tied with “the Slovak” for the highest rate of emigration from Europe to the United States (18 immigrants per year per thousand in the European population). Because of such a high rate, the Commission commented that the high absolute level of Jewish immigration could not continue for long. The Commission wrote: “The primary causes have been a desire for better economic conditions, and the persecutions directed against the Jewish population.” (U.S. Immigration Commission 1911, Vol. 5, *Dictionary of Races or Peoples*, pp. 73–75). Jewish migration was more likely to be in a family context than as unattached young adults, reflecting their basic refugee orientation (see, for example, Kessner 1977, Chap. 5; Kuznets 1975, pp. 94–100; Howe 1976, pp. 57–63).

³Jewish men have substantially higher levels of schooling, earnings, and occupational status than other non-Hispanic white men, both overall and when other variables are held constant. They also have a larger return on human capital investments. For analyses of the skills and labor market characteristics of contemporary American Jews, see Chiswick (1983, 1985, 1989a).

⁴Notable exceptions are studies by Simon Kuznets (1975) and Arcadius Kahan’s posthumously published collected essays (1986), as well as studies by Kessner (1977) and Pearlman (1988). These studies did not have the advantage of a computerized data file for statistical analysis as is used in this analysis. Kessner (1977) did sample Jewish and Italian households from the United States and New York State Census manuscripts for selected election districts in New York City.

occupational prestige. The analysis of occupational attainment is presented in the next section. As part of the summary and conclusion, broader implications of the analysis are developed. One concern is the consistency of the turn-of-the-century adjustment pattern of immigrants with the patterns observed in more recent decades. Another is the identification of aspects of the Jewish immigrant labor market experience at the turn of the century that may account for the high level of achievement in later decades and generations.

The Data

Previous attempts to use statistical analysis to study the skills and labor market status of turn-of-the-century immigrants have suffered from the limited availability of adequate data. In particular, until recently there was no random sample of the turn-of-the-century population with data reported in an individual or microlevel format, but rather only in a grouped (aggregated or cross-tabulated) format.⁵

A simple random sample of the turn-of-the-century population with extensive demographic and labor market data is now available in a microdata format. The 1900 Census of Population manuscripts have passed the legal moratorium of 72 years and privacy restrictions are no longer applicable. The records have been sampled and the census information on approximately a 1-in-760 sample of the population has been put in a microdata file (Graham 1980). The data file includes the full array of variables available from the 1900 Census manuscripts. A summary of the decennial census questions can be found in U.S. Bureau of the Census (1979). The variables used in the statistical analysis in this study are reported in Table 4.1.

The 1900 Census did not inquire into the respondent's income or schooling attainment, two key variables in contemporary labor market analysis. It did, however, ask other important questions, including occupation, literacy (ability to read or write in some language), nativity, and, for the foreign born, country of origin and

⁵Some studies of turn-of-the-century immigrants, such as that of Douglas (1919), focused on administrative data published by the immigration authorities that cross-tabulated occupation at time of immigration by country of origin and period of immigration. Other studies focused on cross-tabulated data generated by state labor bureaus, such as the Eichengreen and Gemery (1986) study of immigrants in Iowa in 1894. The state labor data usually have a narrow geographic or occupational focus. Still others have used aggregated data published by the U.S. Commissioner of Labor, but these also tend to focus on particular industries or occupations (see, for example, Fraundorf 1978).

Perhaps the most frequently used data are the extensive cross-tabulations published by the Dillingham Immigration Commission in 1911. The Commission's 1909 survey collected detailed information on wage and salary workers in mining and manufacturing, of whom about two-thirds were foreign born. Random sampling was not used, and the survey focused on industrial sectors and regions of the country with a heavy concentration of immigrants. Modern econometric techniques have been used to study the wages of immigrants in general using these data in Blau (1980), Higgs (1971), Hill (1975), and McGouldrick and Tannen (1977), among others. Chiswick (1989b) used these data to study Jewish immigrant wages in manufacturing. The authors all recognized the limitations inherent in these data.

Table 4.1 Variable list

Variable	Code	Description
Occupation	PREST	Occupational prestige score (See the Appendix)
Literacy	READWRT	Can read and/ or write in English or another language
Labor market experience (years)	EXP, EXPSQ	EXP= Age-15 EXPSQ = (EXP) ²
Years in the U.S.	YRSUS, YRSSQ	Duration in the U.S. for the foreign born, and its square
Marital status ^a	MARRSP	Married, spouse present
Region ^a	SOUTHEQ1	Lives in a Southern state
Size of place ^a	RURALEQ1	Lives in a rural area
Jews ^a	JEWS	Person or one or both parents born in Russia or Poland-Russia
Mexicans ^a	MEX	Person or one or both parents born in Mexico
Southern and Eastern European other than Jews ^a	SOEAEUNR	Born in a Southern or Eastern European country other than Russia or Poland-Russia
Foreign-born parents ^a	FORPAR	Native born but with at least one foreign born parent

^aDichotomous variable equal to unity for indicated characteristic

duration in the United States. It also included the usual basic demographic questions, such as age, sex, marital status, and place of residence, that are invaluable for labor market research. Extremely detailed occupational categories were created from the 1900 manuscript information. The 1900 occupational categories were then translated into their 1950 occupational equivalents. The 1950 occupational prestige score was then determined for each observation (Graham 1980). The occupational prestige score serves as the dependent variable in this analysis. For a fuller discussion of the prestige scores, see the Appendix.⁶

An indirect measure of labor market experience must be created. The standard proxy measure in contemporary labor market studies, the number of years since leaving school, cannot be used for two reasons. One is the absence of data on years of schooling. The other is the relevance for adult work of labor market experience acquired as a child. Most adults in the labor market in 1900 left school when they were still children and their labor market experience may not be relevant for their occupational status as adults. The measure of potential labor market experience used in this study is the number of years since age 15.⁷ The implicit assumption is

⁶In his study of economic mobility among Jewish and Italian immigrants living in selected immigrant intensive areas in New York City (1885–1915), Kessner (1977, p. xv) reports that the use of a prestige scale gives the same basic conclusions as did his analysis of occupational attainment based on combining the detailed occupational categories into five broad groups based on level of skill.

⁷This measure is preferred to age simply for comparative purposes with other studies.

that there was continuous full-time attachment to the labor market from age 15 onward and that labor market experience prior to age 15 was irrelevant.

Jews can be identified only indirectly in the 1900 Census. In accordance with Census Bureau practice, the 1900 Census did not ask the respondent's religion.⁸ The "mother tongue" technique for identifying Jews (i.e., those who report their mother tongue as Yiddish, Hebrew, or Ladino) cannot be used because the 1900 Census did not ask for the identification of non-English languages.⁹ It has been shown elsewhere, however, that for the early part of this century Russian origin is a good proxy for identifying East European Jews (Kuznets 1975; Rosenthal 1975). Therefore, for the purpose of this study, East European Jewish immigrants are defined as immigrants who reported Russia or Poland-Russia as their country or their parents' country of birth. This procedure overestimates the number of Russian Jews enumerated in the 1900 Census, because some of Russian origin were not Jewish, and may underestimate the number of East European Jews, but estimating their number is not the purpose of this study. To the extent that non-Jewish Russians are misidentified and do not differ from other non-Jews, the methodology underestimates the observed Jewish non-Jewish differentials.

The statistical analysis is limited to males ages 18–64. Entry into the labor market prior to age 18 was typical in 1900. Females are excluded in part because of the low labor force participation rate of married women at the turn of the century and in part because the assumption of actual and expected continuous full-time attachment to the labor market from age 15 deviates too far from reality for women.

Using the Russian-origin definition of Jews, and limiting the analysis to males ages 18–64 for whom all of the relevant variables were reported, the 317 foreign-born Jews in the sample were 6.0% of the white foreign born and 1.4% of all white men (Table 4.2).¹⁰ As would be expected, the Jews were a predominantly urban and northern population; only 14% lived in rural areas and only 3% lived in the South.

⁸The Census Bureau included a question on religion in the March 1957 Current Population Survey (CPS). Although they released some socioeconomic tabulations from this survey, no public use sample has been made available.

⁹The 1970 Census included questions on parental nativity and "mother tongue," thereby permitting an analysis for second-generation American Jews. A person has a non-English "mother tongue" if there was a language other than or in addition to English spoken in the home when the person was a child, even if the person no longer speaks this language. Traditional Jewish languages include Hebrew, Yiddish, and Ladino, a language spoken by Sephardic (Spanish origin) Jews. For analyses of the human capital and earnings of Jews using the 1957 CPS and the 1970 Census, see Chiswick (1983, 1985) and Kuznets (1972). Some nongovernmental data files include a question on religion and have a sufficiently large number of Jews for a statistical analysis. For example, for an analysis of Jews using the NORC General Social Survey see Chiswick (1989a).

¹⁰The 317 observations in the regression analysis are less than the full sample of Jews because of missing values for several variables, primarily year of immigration to the United States. There were also some occupational categories for which there were no prestige scores (e.g., the military, landlords). For 13 observations identified as Jewish because of their parent's birthplace, their own was Lithuania (4), Germany (4), England (2), and other parts of Central and Eastern Europe (3).

Table 4.2 Means and standard deviations of selected variables for white men ages 18–64, 1900^a

Variable	Native born	Foreign born	
		All	Jews
PREST	23.45 (20.18)	19.57 (17.56)	20.72 (19.13)
READWRT	0.96 (0.18)	0.90 (0.30)	0.78 (0.41)
EXP	19.51 (12.18)	23.75 (11.96)	17.88 (10.44)
YRSUS	–	18.72 (12.20)	10.25 (6.93)
MARRSP	0.55 (0.50)	0.63 (0.48)	0.58 (0.49)
SOUTHEQI	0.28 (0.45)	0.05 (0.21)	0.03 (0.17)
RURALEQI	0.54 (0.50)	0.30 (0.46)	0.14 (0.35)
JEWS	0.0008 (0.028)	0.060 (0.24)	1.00 (0.00)
MEX	0.0014 (0.037)	0.009 (0.10)	0.00 (0.00)
FORPAR	.27 (0.45)	–	–
Sample size	16,943	5289	317

^aIncludes only those observations without missing values for variables used in the regression analysis. Standard deviations in parentheses

Source: 1900 Census of Population, Public Use Sample; approximately 1/760 sample of the population

In contrast, among native-born white men, 54% lived in rural areas and 28% were in the South, and among foreign-born white men, 30% lived in rural areas and 5% in the South.

The Jews were also a relatively recent immigrant group. They averaged only 10.3 years of residence in the United States compared to 18.7 years for all white immigrants. Reflecting their more recent immigrant status, they were also younger; their average age was 33 years compared to 39 years for the white foreign born.

Literacy was not as universal among the Jewish immigrants as popular folklore would lead one to believe. Among those identified as Jews, only 78% were literate; that is, they reported that they could read or write in at least one language. In comparison, 96% of native-born whites and 90% of the foreign-born whites, predominantly from North-Western Europe, were literate.¹¹

¹¹ By way of comparison, literacy rates were 60% for U.S.-born blacks, 56% for those of Mexican origin (Mexican birth or parentage), and 70% for the Chinese and Japanese, of whom nearly all were foreign born.

Kahan (1986, pp. 45–46) addressed the issue of male East European Jewish immigrant literacy. He wrote: “The myth is based upon the correct assumption that the majority of males received the traditional instruction in the religious schools and therefore could read the prayers and even the Bible. What is often forgotten, however, is that the instruction concentrated primarily on reading, not on writing, and that the reading of Hebrew characters in the prayer book did not guarantee the ability to read newspapers, books, etc. The typical product of such elementary traditional instruction, which was the entire education for the poorer classes [in Czarist Russia], was a person semi-literate even in his own language.”¹²

Analysis of Occupation

The 1900 occupational distributions of the Jewish immigrant men, all white immigrant men and native-born white men, using the 1950 occupational classifications, are reported in Table 4.3.

Only 2.3% of the Jewish immigrants were in the Professional and Inspector occupations, a category which includes doctors, lawyers, rabbis, cantors, and

Table 4.3 Occupational distribution in 1900 of white men ages 18–64, 1950 occupational definitions

Occupation	Native born	Foreign born	
		All	Jews
	(Percentage)		
Professional and inspector	4.1	2.5	2.3
Manager and administrator	6.1	6.3	8.2
Clerical	4.4	2.2	1.5
Sales and clerk	4.2	3.4	7.6
Craft	13.2	18.7	19.0
Operative	8.9	16.4	17.0
Service	2.5	3.7	2.6
Laborers	12.8	23.3	22.8
Agriculture (including dairy)	38.2	19.4	11.1
Military ^a	0.7	0.4	0.3
Miscellaneous occupation ^a	1.5	2.1	6.4
No occupation ^a	3.3	1.9	1.3
Total	100.0	100.0	100.0
Sample size	18,435	5865	342

Note. Detail may not add to total due to rounding
^aOccupational prestige scores are not available for these activities
Source: 1900 Census of Population, Public Use Sample; approximately 1/760 sample of the population

¹² In a similar vein, Kessner (1977, p. 41) quotes a 1917 novel by Abraham Cahan about Jewish ghetto life: “The most ignorant ‘man of the earth’ among our people can read the holy tongue [Hebrew], though he may not understand the meaning of the words.”

teachers, in contrast to the 2.5% for all foreign-born white men and 4.1% for native-born white men. These data are consistent with other studies which indicate that there was relatively little migration of Jewish professionals from Eastern Europe during this period.¹³

Jews were, however, somewhat more likely to be in the manager and administrator category, 8% in contrast to the 6% for other foreign-born men and the native born.

Otherwise, the occupational distribution of the Jewish immigrants reflected their predominantly urban residence. As with other immigrants, they were more likely to be in craft and operative jobs (about 36% for Jewish and non-Jewish immigrants) and to be laborers (23% for both groups). They were far less likely than other immigrants and the native born to be in agricultural occupations.

The 11% of the Russian Jews in agricultural occupations might seem high. Some may be misclassified non-Jewish Russians. However, many Jews were in the dairy industry which took on a special significance because of Orthodox Jewish dietary laws regarding milk.¹⁴ There were also explicit attempts at establishing Jewish farms at this time for ideological reasons, but most of these farming efforts were unsuccessful (Manners 1972, Part IV). Some of the Jewish farmers, out of financial necessity, took in boarders in the summer who were seeking to escape the heat and disease of the Jewish urban slums. A few evolved into major resort hotels (e.g., Grossingers and the Concord in the Catskill Mountains, New York).

a. Analysis by Nativity

The occupational prestige score for Jewish immigrants in 1900 was 20.7 points (Table 4.2). This is significantly lower than the score for the native born white men (23.5 points), but not significantly different from that of all non-Jewish foreign-born white men (19.6 points). When the foreign born are separated by region of origin, the prestige score for those from Northwestern Europe and Canada is 20.6, virtually the same as for Jewish immigrants, but for non-Jews from Southern and Eastern Europe it is 14.7 points, which is significantly lower than the Jewish value. The average score for the Jews and Northwest European/Canadian immigrants is comparable to that of carpenter and joiner in the building trades (score of 19), less than that of tailor (23), but greater than that of a blacksmith (16) or a longshoreman (11) (see the Appendix).

¹³ Howe (1976, p. 64) has written: "Most historians of the Jewish immigration have agreed that the social and cultural characteristics of the Jewish immigrants in the 1905–1914 period [between the unsuccessful revolution and the start of World War I] were notably different from those who came during the last two decades of the nineteenth century. By and large, the later immigrants brought with them a somewhat higher cultural level than those who had come twenty-five or thirty-five years earlier.... Important segments of the Jewish intelligentsia now felt that the time had come to leave." See also Kuznets (1975) and Kahan (1986).

¹⁴ To the extent that the East European immigrants observed Jewish religious practice it was that of the Orthodox. According to the *Encyclopedia of the Jewish Religion*: "To prevent any doubts regarding a possible admixture of milk from prohibited ("unclean") species, the animal should be milked either by a Jew or in the presence of a Jew." (*Encyclopedia* 1965, p. 263).

Compared with the native born and other white immigrants, the Jews were at a disadvantage in the labor market as a result of a lower literacy rate, less total labor market experience, and less labor market experience in the United States. On the other hand, their urban residence enhanced their occupational attainment.

The multiple regression analyses for the native born, the foreign born, and the Jewish immigrants where the occupational prestige score is the dependent variable are presented in Tables 4.4 and 4.5.¹⁵ The approach follows the methodology previously developed for the analysis of immigrant earnings (Chiswick 1978). The explanatory variables include human capital variables (e.g., literacy and labor market experience in total and in the United States) and demographic characteristics.

Table 4.4, column 1 shows that literacy is an important determinant of occupational status. Those who could read or write a language had an occupational prestige score that exceeded that of the illiterate by 8.2 points for native-born whites and foreign-born whites, and 7.6 points for Jewish immigrants. An 8-point difference is approximately the difference between a blacksmith and a tailor.

Among the native born, labor market experience is an important variable with a highly significant nonlinear effect; occupational scores rise with experience, but at a decreasing rate. An additional year of experience raises the occupation score by 0.31 points when evaluated at 10 years. Among the foreign born, when controlling for duration in the United States, an additional year of total labor market experience measures the effect of an additional year of country-of-origin (or pre-immigration) experience. Studies of immigrant earnings and occupational attainment consistently find that pre-immigration experience has a small effect on labor market outcomes in the destination (see Chiswick 1978, 1979). Among the Jews and the foreign-born white men at the turn of the century, pre-immigration labor market experience is found to have no statistically significant impact on occupational status.

Duration in the United States does, however, have an important impact on occupational status in the United States for both the Jews and the foreign-born white men. The coefficient of duration in the United States and its square are both highly statistically significant and they have large magnitudes. The effect is nonlinear; occupational status increases with each additional year of residence, but at a decreasing rate. When evaluated at 10 years, approximately the mean duration in the United States for the Jewish immigrants, an extra year increases the occupational score by 1.06 for the Jews and by 0.33 for all white immigrants.¹⁶

¹⁵ The distribution of the occupational prestige score is positively skewed, but less skewed than a log normal distribution. In Tables 4.4 and 4.5 the prestige score is regressed as a linear function of the explanatory variables. The equations were also estimated with the natural logarithm of the prestige score as the dependent variable. These regressions offer the same findings.

¹⁶ The steeper gradient of occupational prestige with respect to duration in the United States for the Jews cannot be attributed to a greater remigration rate of less successful Jews. Return migration of Jews was relatively rare. Nor is there reason to believe that unmeasured dimensions of worker quality fell more sharply for Jews than others in the last decades of the nineteenth century. A steeper profile is a characteristic of refugee populations, as were the Jewish immigrants (Chiswick 1978).

Table 4.4 Regression analysis of occupational prestige, males age 18–64, 1900

	Native and foreign born	Native born	Foreign born	
			All	Jews
Variable	(1)	(2)	(3)	(4)
READWRT	8.502 (14.71)	8.20 (10.37)	8.15 (10.21)	7.62 (3.03)
EXP	0.386 (8.69)	0.471 (9.18)	–0.057 (–0.63)	–0.594 (–1.60)
EXPSQ	–0.007 (–7.81)	–0.008 (–7.86)	–0.0009 (–0.53)	0.012 (1.53)
MARRSP	0.730 (2.49)	0.212 (0.62)	2.850 (5.29)	0.728 (0.28)
SOUTHEQ1	0.927 (2.91)	1.051 (3.08)	4.150 (3.78)	7.574 (2.79)
RURALEQ1	–13.646 (–52.19)	–15.118 (–49.65)	–8.258 (–16.46)	–9.998 (–3.62)
FOR	–10.781 (–13.64)	^a	^a	^a
YRSUS	0.277 (3.97)	^a	0.366 (5.38)	2.157 (4.87)
YRSSQ	–0.001 (–0.75)	^a	–0.0020 (–1.50)	–0.055 (–3.42)
JEWS ^b	2.654 (2.46)	11.621 (2.25)	3.102 (3.15)	^a
MEX	^a	–9.254 (–2.42)	–0.765 (–0.30)	^a
FORPAR	–1.325 (–3.98)	–1.609 (–4.67)	^a	^a
CONSTANT	18.597 (24.99)	19.013 (20.17)	8.723 (7.26)	7.173 (1.73)
<i>N</i>	22,230	16,943	5289	317
<i>R</i> ²	0.1423	0.1505	0.1124	0.2017
$\overline{R^2}$	0.1419	0.1499	0.1107	0.1809
Standard error	18.23	18.63	16.55	17.36

Note. Dependent variable = occupational prestige (PREST). *t* ratios in parentheses

^aVariable not included

^bRefers to foreign-born Jews except in column (2) where it refers to native-born Jews

Source: 1900 Census of Population, Public Use Sample; approximately 1/760 sample of the population

Table 4.5 Regression analysis of occupational prestige, foreign born males age 18–64, by Region

	All	North and West Europe, Canada and Jews		South and East Europe and Jews	
Variable	(1)	(2)	(3)	(4)	(5)
READWRT	7.238 (8.69)	8.709 (7.39)	9.067 (7.72)	5.877 (5.67)	5.896 (5.68)
EXP	–0.040 (–0.44)	0.059 (0.56)	0.054 (0.52)	–0.526 (–3.00)	–0.512 (–2.92)
EXPSQ	–0.0012 (–0.70)	–0.0031 (–1.59)	–0.0030 (–1.56)	0.0100 (2.72)	0.0098 (2.66)
MARRSP	2.691 (5.00)	3.023 (4.96)	3.141 (5.15)	1.140 (1.05)	1.174 (1.08)
SOUTHEQI	4.297 (3.93)	6.055 (4.65)	5.961 (4.57)	3.484 (1.58)	3.270 (1.49)
RURALEQI	–8.349 (–16.67)	–8.402 (–15.01)	–8.336 (–14.90)	–8.236 (–7.60)	–8.089 (–7.48)
YRSUS	0.179 (2.31)	0.134 (1.60)	0.209 (2.58)	0.788 (4.82)	0.877 (5.69)
YRSSQ	0.0009 (0.64)	0.0017 (1.09)	0.0004 (0.29)	–0.0003 (–2.07)	–0.0108 (–2.45)
JEWS	–3.125 (–1.72)	–2.736 (–1.44)	2.599 (2.48)	1.680 (0.94)	4.078 (3.93)
JEWS*YRSUS	0.499 (3.58)	0.486 (3.38)	<i>a</i>	0.233 (1.64)	<i>a</i>
MEX	–2.099 (–0.82)	<i>a</i>	<i>a</i>	<i>a</i>	<i>a</i>
SOEAEUNR	–5.060 (–4.32)	<i>a</i>	<i>a</i>	<i>a</i>	<i>a</i>
SOEAEU*YRSUS	0.257 (3.48)	<i>a</i>	<i>a</i>	<i>a</i>	<i>a</i>
CONSTANT	11.961 (8.69)	9.728 (5.82)	8.521 (5.21)	10.866 (5.41)	9.973 (5.16)
<i>N</i>	5289	4360	4364	1162	1162
<i>R</i> ²	0.117	0.095	0.092	0.186	0.184
$\overline{R^2}$	0.115	0.093	0.091	0.179	0.178
Standard error	16.51	16.87	16.89	15.33	15.34

Note. Dependent variable = occupational prestige (PREST). *t* ratios in parentheses

^aVariable not included

Source: 1900 Census of Population, Public Use Sample; approximately 1/760 sample of the population

When white immigrants are compared with white native parentage men (Table 4.4, column (1)), the non-Jews have an initial 10.8-point occupational prestige score disadvantage and although this gap narrows with duration in the United States it never closes. For example, at 20 years of residence the gap is 5.6 points. In a regression in which only Jewish immigrants and native-born white men are studied, the Jews are at a larger initial disadvantage.¹⁷ At arrival their occupational prestige score is 18.4 points lower than the native-parentage white men. Because of the steeper rise in occupational status with duration, however, the Jews catch up to native parentage white men at around 14 years.¹⁸

The occupational status of the Jewish immigrants can also be compared to that of the small number of Russian-parentage native-born men. When this is done the immigrants are initially at a very large disadvantage (-29.5 points), the gap narrows sharply with U.S. labor market experience, but never closes.¹⁹

b. Analysis by Region of Origin

The regression in Table 4.4, column (3), shows that, other variables the same, the Jewish immigrants had an occupational prestige score significantly higher (by 3.1 points) than other immigrants of European or Canadian origin.²⁰ The 3.1-point advantage represents a 16% higher prestige score.²¹ The regression equations in Table 4.5 examine the apparent occupational advantage of the Jews. Other things the same, the occupational prestige score of the Jews exceeds that of the non-Jewish

¹⁷ Partial regression coefficients (controlling for literacy, experience, location, and marital status) in a pooled regression of foreign-born Jews and native-born white men:

Variable	Coefficient	<i>t</i> ratio
JEWS	-18.41	-7.15
JEWS*YRSUS	2.03	4.60
JEWS*YRSSQ	-0.05	-3.25
FORPAR	-1.62	-4.71

¹⁸ This pattern is consistent with Kahan's speculation (1986, pp. 112–114) based on his historical study of the period.

¹⁹ Partial regression coefficients (controlling for literacy, experience, location, and marital status) in a pooled sample of Jewish immigrants ($N = 317$) and native-born men of Russian parentage ($N = 14$):

Variable	Coefficient	<i>t</i> ratio
FOR	-29.455	-5.37
FORYRUS	2.153	4.84
FORYRSQ	-0.054	-3.38

At 20 years of residence the foreign-born Jews have an 8.0-point lower occupational score.

²⁰ The only other numerically significant group of white immigrants is the Mexicans. Other variables the same, the occupational status of Mexican immigrants did not differ from that of other white immigrants.

²¹ The Jewish advantage is 14% when the dependent variable is the logarithm of the prestige score.

Northern and Western European and Canadian immigrants by 2.6 points and that of non-Jewish Southern and Eastern European immigrants by 4.1 points (Table 4.5, columns (3) and (5)).²² Both of these differences are highly statistically significant.

There are important differences in the effect of human capital on occupational status by region of origin. Literacy has the largest effect (about 9 points) on occupational status for those from Western Europe and Canada, many of whom are from English-speaking countries and hence are literate in English. Literacy, which may be in any language, has a smaller partial effect for Jews (about 7 ½ points), and the smallest effect for non-Jews from Southern and Eastern Europe (less than 6 points). Pre-immigration labor market experience does not seem to matter in any consistent manner.

Labor market experience in the United States has a weaker differential effect for Western European and Canadian immigrants than it has for those from Southern and Eastern Europe. This may arise from the greater transferability to the United States of the country-of-origin skills of the former (Chiswick 1978, 1979). The Jews, however, perhaps reflecting their refugee status, have the steepest profile. Among the Jews, occupational status rises by nearly half a point (0.49) more per year in the United States compared to Western European and Canadian immigrants, and by nearly a quarter of a point (0.23) more per year in the United States than for Southern and East European immigrants (Table 4.5, columns (2) and (4)).²³ Both differences are statistically significant.

Even more striking, however, is the so-called “catch-up.” Compared with Western European and Canadian immigrants the Jews have a 2.7- point occupational disadvantage among those who just arrived, the difference disappears at 5.5 years, after which the Jewish immigrants have increasingly higher occupational prestige scores.²⁴ By way of comparison, Jewish immigrants exhibit an initial advantage over the other Southern and Eastern European immigrants (1.7 points at arrival), and this gap grows with duration in the United States.²⁵

The greater level of economic success of the Jewish immigrants is also found in the Dillingham Immigration Commission data on the wages of Jewish and non-Jewish production workers in mining and manufacturing. Other variables the same, including literacy, duration in the United States, and region of residence,

²² When the natural logarithm of the prestige score is the dependent variable the Jewish occupational prestige scores are higher by 8.7 and 22.6% respectively.

²³ In his comparative analysis of Jewish and Italian immigrants in New York City, using manuscript records from the New York State Census of 1905, Kessner (1977, pp. 109–110) reports that the Jews experienced a steeper rise in occupational attainment with duration of residence in the United States.

²⁴ When the natural logarithm of the prestige score is the dependent variable, the catch up with the Western European and Canadian immigrants is at 6.4 years. Relative to those of Southern and Eastern European origin the Jews at arrival have a score higher by 17.4% and the differential increases by 0.5% per year.

²⁵ In a 1919 article Paul Douglas made a similar point. He wrote (p. 393): “... the Jews are the most highly skilled of the newer races,” that is, the Southern and Eastern European immigrants.

the Jewish immigrant production workers earned significantly higher weekly wages (regression coefficient 0.173, t ratio 2.70) than their non-Jewish counterparts (Chiswick 1989b).

c. Differential Effect of Location

There are very dramatic differences in the effect of living in a Southern state on occupational status among the three groups (Table 4.4, columns (2) to (4)). Among native-born white men, Southern residence was associated with a statistically significant but numerically small 1.1-point advantage, other things the same. Among all white immigrants there is a 4.2-point advantage. There is an impressive 7.6-point advantage for the 3% of the Jews living in the South.²⁶ These coefficients are significantly different from each other.

It appears that immigrants in general, and Jewish immigrants in particular, avoided the South and “required” a greater occupational premium to live there.²⁷ White Southern discrimination against immigrants, and especially Catholics and Jews, undoubtedly was in part responsible for the geographic distribution.²⁸ Economic opportunities also played an important role. Perhaps only high occupational status and the resulting income could encourage some Jews to remain or move to the isolated Jewish communities in the South. To move to the South meant to forsake the Northern communities with higher Jewish concentrations, and hence lower cost access to Jewish communal institutions, friends and relatives, and less exposure to overt antisemitism.

d. Second-Generation Americans

Although the sample of native-born men with Russian-born parents is small, only 14 observations, an examination of their occupational status in comparison with other native-born white men is instructive. Other variables the same, the second-generation Russian-Jewish men had a much higher occupational prestige score (by 11.6 points, $t = 2.3$) than white men with both parents born in the United States (Table 4.4, column (2)). This is not simply a second-generation effect. Overall, compared with adult white men with native-born parents, non-Jews with at least one foreign-born parent (not of Russian or Mexican origin) had a significantly lower occupational score (by 1.6 points, $t = -4.7$), and those of Mexican parentage (sample size 24) fared even worse (9.3 points lower than the benchmark, $t = -2.4$). Note also that the group identified as Americanborn Jews are not the children of the

²⁶ A 7.6-point differential is roughly equivalent to the difference between a blacksmith (16) and a tailor (23). See the Appendix for occupational prestige scores.

²⁷ Even in contemporary data Jews have a different regional pattern. In 1970 Census data American Jews (defined as second-generation Americans with Hebrew, Yiddish, or Ladino as their mother tongue) earn more in the South than in the non-South, although for most other groups earnings are lower in the South. (Chiswick 1983).

²⁸ The trial and mob lynching in Georgia (1913–1915) of Leo Frank, a Jewish pencil factory manager falsely accused of murdering a young female employee, was perhaps the most extreme manifestation of a persistent antisemitism in the South (see Dinnerstein 1968).

German Jewish immigrants of the 1840s to 1860s who became highly successful merchants. Russian parentage was used to define the Jews under study. The impressive success of the second-generation Russian Jews at the turn-of-the-century parallels the findings using contemporary data on the native born.

Summary, Conclusions, and Further Thoughts

This chapter has analyzed the occupational status of adult white male turn-of-the-twentieth-century immigrants both among themselves and in comparison with adult white native-born men. Its particular focus has been on Russian Jewish immigrants. The statistical analysis reveals that the Jewish immigrants rapidly attained a high occupational status in comparison with other immigrants, including those from Western Europe and Canada, and white men born in the United States.

Human capital was an important determinant of occupational status in turn-of-the-century America. Literacy increased occupational prestige by over 8 points for the native-born or by about one-third of the mean value. It increased occupational prestige by about 9 points for Western European and Canadian immigrants, by 7 ½ points for Jewish immigrants, and by less than 6 points for other Southern and Eastern European immigrants. Years of labor market experience were also very important for both the native and the foreign born. Among the foreign-born men, however, pre-immigration experience had no significant effect on occupational status, but experience in the United States labor market was very important. The impact of U.S. experience was greatest for the Jews, smaller for others from Southern and Eastern Europe, and least important for the Western European and Canadian immigrants.

Thus, for the group with the greater transferability of skills to the United States (i.e., the Western European and Canadian immigrants) literacy is more important and experience in the U.S. labor market is less important. It therefore appears that the turn of-the-century immigrant pattern of labor market adjustment has characteristics similar to those observed in contemporary data (Chiswick 1978, 1979).

In general, turn-of-the-century immigrants had a significantly lower occupational prestige score than the native born, both overall and when other variables are the same. Although this gap narrows with U.S. labor market experience, it is not closed. Similarly, Southern and Eastern European immigrants have a lower occupational prestige score than those from Western Europe and Canada, and while this gap also narrows over time, it too does not close. Because of the greater effect of duration in the United States on occupational status for Jewish immigrants, however, they obtain occupational status parity with the native-parentage white men at about 14 years in the United States and with Western European and Canadian immigrants at about 5 ½ years. The Jews apparently started in the United States with a higher occupational attainment than Southern and Eastern European immigrants, and the gap widened with additional U.S. experience.

Second-generation Americans tended to have a lower occupational prestige score than native-parentage white men. Second-generation Americans of Russian-Jewish origin, however, had a significantly higher score than native-parentage white men, when other variables are held constant.

Several factors may be responsible for the significantly steeper effect of duration in the United States for the Jewish immigrants. The Jews were disproportionately a refugee population fleeing the Russian pogroms. As a refugee population, the Jews as a whole would have skills that were less readily transferable to the U.S. labor market. There may have had less planning and preparation for the migration, and many with skills with little transferability joined the migration stream. With time in the United States human capital investments would substantially increase the transferability of their skills and thereby their occupational status. Yet, while this might explain a narrowing of an initial Jewish refugee occupational disadvantage, it cannot explain the attainment of a higher occupational status than even the Western European and Canadian immigrants after only 5.5 years in the United States.

Although migrants tend to be favorably “self-selected” for success in the destination in terms of ambition and motivation, this would be less true of a mass migratory movement. Yet, the migration of Russian Jews to the United States is better characterized as a mass migration rather than a selective migration. Thus, if anything it would seem that on average the Jewish immigrants would have had a less intense favorable selectivity than other turn-of-the-century migrants.

The Jewish immigrants had a much lower propensity to return to their country of origin, again reflecting their refugee and family migration circumstances. As a result, they had a greater incentive to make investments specific to the United States. Furthermore, their rapid improvement in occupational status suggests that there may be important unmeasured variables which may be associated with their “Jewishness.” In particular, the larger effect of literacy compared to other Southern and Eastern European immigrants may reflect a higher level of investment or a greater return on investments in schooling and other forms of human capital.

This study also suggests that at least part of the explanation for the high levels of schooling, income, and occupational status of contemporary American Jews may be found in the same element or elements that produced the dramatic success of turn-of-the-century Jewish immigrants in adapting to the American labor market.²⁹

Historians, writing over a period of several decades, shed light on Jewish immigrant achievement. Some stress the importance of education in the Jewish family. In an essay on Jewish educational attainment, Dinnerstein (1982, p. 45) writes: “Basically [East European Jews] agreed upon the importance of education in the development of a full human being. From their earliest days children imbibed this attitude, first unconsciously, later with more awareness.... In the

²⁹ It has been shown that ethnic group differences in incentives for human capital investment can persist from one generation to the next, even if the initial differences are small and caused by exogenous factors (Chiswick 1988, 1989a).

home children learned to venerate books, to remain quiet while father studied, and to treat learned guests with great respect.... The Jewish immigrants who came to this country in the 1880's and after brought these values and traditions with them."

This emphasis on education had broad implications for Jewish children. Kuznets (1972, p. 13) cites several turn-of-the-century sources, including John R. Commons' observation that "Jewish women are employed (in factories) to a much less extent than the women of other nationalities; and their children are kept in school until 15 or 16 years of age." This greater parental investment in children in the home had pay-offs in schooling. Kuznets (1972, p. 13) cites a 1900 Industrial Commission report: "In the lower schools, the Jewish children are the delight of their teachers for cleverness at their books, obedience and general good conduct."

Education by itself is not sufficient. The application of this education in the labor market is central. Based on his studies of the period Kahan (1986, p. 102) wrote: "While the Jewish immigrants from Eastern Europe brought along little money or physical assets, their value for the U.S. economy, and the source of their expected incomes, consisted of their skill endowment and their ability to employ their skills gainfully..." In a pre-World War I study Ruppin (1913, p. 51) noted: "In the struggle for life, besides intellectual gifts, the industry, versatility and powers of adaption of the Jew stood him in good stead.... Appreciation of the value of learning and study is a tradition among Jews to an extent unequalled perhaps by any other people."

These authors are suggesting that the achievement of turn-of-the-century Jewish immigrants, and their American-born descendants, rested not solely with their skills, narrowly defined, but with what in modern labor economics would be called "allocative efficiency"—the ability to discern the value of skill acquisition, to identify the skills worth developing, and to get the most out of the skills that are developed (Schultz 1975). And perhaps those with greater allocative efficiency are more successful in germinating this trait in their children.

If the important unmeasured variable is the greater allocative efficiency brought to the United States by the East European Jews, one would expect to observe that they met with comparable levels of success in other diaspora countries, and that their economic successes were greater in dynamic economies where allocative skills have greater value than in stagnant ones. This does appear to be the case. Jewish immigrants and their descendants have achieved labor market success in other diaspora countries on five continents.³⁰

Studies of the determinants of allocative efficiency may be required for a deeper understanding of American Jewry, and for the broader issues inherent in the study of immigrant adjustment and racial and ethnic group differences in skill formation and labor market outcomes.

³⁰ See, for example, Elazar and Medding (1983) for a study of Argentina, Australia, and South Africa; Tomes (1983) for Canada; and Prais and Schmool (1975) for Britain.

Appendix: Construction of the Occupation Prestige Scores for the 1900 Census of Population

This appendix discusses the occupational coding and the assignment of the occupational prestige scores on the 1900 Census of Population microdata file, as discussed in the user code book (Graham 1980). Additional material is derived from the 1900 Census questionnaire and enumerator instructions (U.S. Bureau of the Census 1979, pp. 32–39) and from Reiss et al. (1961), the source of the occupational prestige scores. The 1900 Census of Population required that the enumerator indicate the “Occupation, trade or profession” for each person 10 years of age or older who is in “gainful labor” (i.e., for pay or profit). For those with more than one occupation the enumerator was to list the one that provided the most income, and if this could not be determined then the one involving the larger part of the person’s time. Occupations were to be reported for students if they spent a greater portion of their time on that occupation rather than as a student. Detailed instructions were provided as to the classification of occupations. There was no question on industry. As a result of the complexity of recording occupations, the enumerator instructions for the occupation question were longer than for all of the other questions combined! The occupation questions and instructions are reproduced in U.S. Bureau of the Census (1979, pp. 32–37).

The occupational data were transcribed from the manuscript records and all of the occupations were assigned to one of the approximately 950 occupational categories. These detailed codes were then combined so as to replicate as close as was possible the occupational categories used by the Bureau of the Census for the tables published at the time from the 1900 Census.

The detailed codes were then converted to the 1950 Census occupational coding scheme used by the Census Bureau. This mapping required collapsing some of the very detailed occupational categories. While there were over 38,000 individuals with codable 1900 occupations, 532 (1%) could not be converted into 1950 occupational equivalents. For an additional 45 individuals there was no prestige score assigned to their occupation. As a result, occupational prestige scores are recorded for over 37,000 individuals.

The occupational prestige scores for the 1950 occupational categories were taken from the socioeconomic index developed by Otis Dudley Duncan in Reiss et al. (1961, Chap. 7 and Appendix Table B-1, column 1).

In a March 1947 survey conducted by North and Hatt for the National Opinion Research Center (NORC) respondents were asked to evaluate occupations. The key question was (Reiss et al. 1961, p. 19): “For each job mentioned, please pick out the statement that best gives your own personal opinion of the general standing that such a job has.

1. Excellent standing
2. Good standing
3. Average standing
4. Somewhat below average standing
5. Poor standing
6. I don’t know where to place that one.”

This question was asked for 90 occupations in total, with individual respondents reporting for a subset. Duncan used the proportion of responses (excluding “don’t knows”) who indicated “excellent” or “good” as the prestige index. Many of the occupations in the NORC survey were much too specific to be matched to the 1950 Census occupational categories. For 45 occupations this matching was possible.

The occupational prestige scores for these 45 occupations were regressed on measures of schooling and income for males in these occupations, as reported in the 1950 Census of Population. The variables used are the percentage in the occupation who are at least high school graduates and the percentage of those with non-zero incomes in 1949 whose incomes were \$3500 or more. The education and income variables were both adjusted (standardized) for the age distribution of the males in the occupation.

The multiple regression had a high explanatory power, R^2 equal 0.83. This regression was used by Duncan to predict the occupational prestige score for all of the 1950 Census occupations (Reiss et al. 1961; Appendix Table B-1). The prestige scores for selected occupations are reported in Table 4.6.

Table 4.6 Occupational prestige scores

Range of scores	Selected detailed occupations	Specific score
0–9	Coal mining	2
	Laborer, general	6
	Farm laborer	6
	Huckster and peddler	8
10–19	Longshoreman	11
	Gold and silver mining	12
	Blacksmith	16
20–19	Sawmill worker	23
	Tailor	23
	Watch factory operative	28
	Confectioner	29
	Butcher	29
30–39	Machinist (iron and steel industry)	33
	Oil well employee	38
	Commercial traveler	39
40–49	Clerical (office)	44
	Model and pattern maker	44
	Printer and pressman	49
50–59	Bookkeeper and accountant	51
	Musician or teacher of music	52
	Hotel keeper	56
60–69	Merchant (lumber)	62
	Insurance and real estate agents	66
	Draftsman and designer	67

(continued)

Table 4.6 (continued)

Range of scores	Selected detailed occupations	Specific score
70–79	Teacher (excluding college)	72
	Chemist	73
80–89	Journalist and editor	82
	Merchant (drugs and medicines)	82
	Banker and stockbroker	85
90–	Physician and surgeon	92
	Lawyer and judge	93

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Chapter 5

Jewish Immigrant Wages in America in 1909: An Analysis of the Dillingham Commission Data



Barry R. Chiswick

“... the Jews are the most skilled of all the newer races.”

Paul Douglas (1919, p. 393)

Introduction

This chapter is concerned with the skills and economic status of Jewish immigrant wage earners (production workers) in manufacturing in the United States at the turn-of-the-century. Although Jewish entrepreneurs and professionals clearly did well in this time period, experiencing rapid economic improvement, what is less clear is whether Jewish production workers in manufacturing also experienced substantial economic improvement compared to other immigrants and the native born in similar industries. Yet most turn-of-the-century Jewish immigrants were production workers in manufacturing. The data from the 1900 Census of Population indicate that nearly 60% of the adult male Jewish (Russian-origin) immigrants were in craft, operative, and (nonfarm) laborer occupations (Chiswick 1991a). About 2% were in the professional and inspector categories and 8% were managers and administrators.¹

This topic is important because the historical experiences of this mass, primarily Eastern European, immigration is of interest for a better understanding of the period. Furthermore, these immigrants were the parents and grandparents of the post-World War II Jewish population that has achieved a very high level of economic success. Was the success of the latter foreshadowed by their immigrant

This is a revision of the original article published in *Explorations in Economic History*, 29(3), July 1992, pp. 274–289.

I am indebted to Professor Francine Blau for making available to me the computer data file she developed from the published records of the U.S. Immigration Commission (1911), and to Xiao-Bo Li for his research assistance. An earlier version of this paper was presented at the Tenth World Congress of Jewish Studies, Jerusalem.

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ancestors, many of whom were wage workers in manufacturing? Finally, an understanding of Jewish immigrant labor market adjustment in America may provide insights relevant for a broader understanding of the adjustment of immigrant groups in general.

Research on the skills and economic status of American Jews has been hampered by the scarcity of appropriate quantitative, as distinct from qualitative data. The data constraints for a study of turn-of-the-century Jewish immigrants are even more severe than for a contemporary analysis. It is difficult to find data that satisfy the three basic requirements – that the data are reliable and include the appropriate variables, that there be a Jewish identifier, and that there be a sufficiently large number of Jews for statistical analysis.

U.S. government statistical policy has been to avoid asking questions on religion or questions that could be used to identify a person's religion. For this reason some studies have been forced to rely on using Russian origin or a Yiddish mother tongue as a mechanism for identifying Jews (see, for example, Chiswick 1985, 1991a, Condran and Kramarow 1991, Kessner 1977, Perlmann 1988, Rosenthal 1975). Furthermore, since Jews are a small proportion of the population, large samples are needed for there to be a sufficiently large number of Jews for a statistically reliable analysis. The pioneering research of Ruppin (1913), Kuznets (1975), Kahan (1986), and others on turn-of-the century American Jews has been limited by these data problems.

A characteristic of the previous research is that it has tended to focus on all Jewish workers, whether wage workers, self-employed, or professionals. Although some studies have included special attention on the working class Jews (e.g., Glenn 1990, Hapgood 1976, and Manners 1972), this has not characterized the statistical studies. To do this requires data on the wages or earnings of wage workers (employees). Most data, and the studies cited above, on economic attainment at the turn of the century are for occupation, thereby precluding this type of analysis.²

This study, however, uses a unique data file that includes the relevant variables for a statistical analysis of economic attainment of Jewish wage earners, includes a direct Jewish identifier, and has a sufficiently large sample of Jews for a statistically meaningful analysis. The data, published in 1911 by the U.S. Immigration Commission, are described in the next section. This is followed by a section in which the weekly wages of the Jewish immigrants are analyzed in comparison with

¹ Kahan (1986, pp. 102–103) reports that the occupational profile prior to migration of turn-of-the-century East European Jewish immigrants, as reported by the immigration authorities, is “characterized by a high participation in manufacturing, the highest among the ethnic immigrant groups for this period. In addition the Jewish immigrants were concentrated in the clothing industry—a special feature of the Jewish occupational structure in Eastern Europe.” From 1899 to 1914 about 64% of the Jewish immigrants reported they had been in manufacturing (of whom half were in clothing); and only 1% were professionals, with no trend over the period. There was no apparent trend in the skill level of the Jewish immigrants over the period. Furthermore, even in the United States during this period most East European Jews were in manufacturing (Kahan 1986, pp. 101–117).

those of other immigrants and the native born. The closing section summarizes the findings and draws some conclusions.

The Dillingham Commission Data

A unique turn-of-the-century data set can be used to study the wages of mining and manufacturing production workers where Jews can be directly identified. The U.S. Immigration Commission, generally referred to as the Dillingham Commission after its chairman, a Senator from Vermont, was created by an Act of Congress in 1907. The Commission published an extensive 41 volume report in 1911, including detailed statistical tables reporting the data it collected.³

The Dillingham Commission surveys were impressive, even by modern standards. The Commission reports that “original information was secured for more than 3,200,000 individuals” (U.S. Immigration Commission 1911, Vol. 1 *Abstract*, p. 20). Although random sampling was not used, as it was not to be developed and implemented for several decades, economic historians who have studied the Commission’s procedures and data have judged them favorably. Despite the possible tendency for data users (including perhaps this author) to exaggerate the quality of the data they study, comments in the literature are instructive. Higgs, for example, writes: “Although the samples were not random, the investigators considered them representative of the national situation, and there is little basis for challenging this belief. It is rare indeed that the economic historian is presented with such an enormous, carefully collected and compiled body of data” (Higgs 1971, p. 422). McGouldrick and Tannen (1977, p. 725) also report: “The result of all this [the Dillingham Commission survey] was a cross sectional study over-representing the proportion of immigrants working in firms where they were highly concentrated but apparently otherwise without serious biases. The authors can only agree with Professor Higgs that the ‘racist’ sentiments of the Commission did not color the value of the data itself, a conclusion also reached by Oscar Handlin and Isaac Hourwich.”

This favorable reaction to the Dillingham Commission data is in sharp contrast to an evaluation of the Commission’s policy recommendations regarding immigration (see, for example, Blau (1980), Douglas (1919), McGouldrick and Tannen (1977)). Even Paul Douglas, writing in 1919, implicitly accepts the

²The U.S. Bureau of the Census, for example, did not ask earnings or income in the decennial census until 1940.

³The Dillingham Commission data on immigrant wages have been studied in recent years using econometric techniques by Blau (1980), Higgs (1971), and McGouldrick and Tannen (1977). These studies did not include a specific analysis for Jews. Directly or indirectly, they did test for wage “discrimination” (i.e., wage differences, when measured variables that determine earnings are held constant) against the foreign born, and all found that it was small or nonexistent.

validity of the statistical tables reported by the Dillingham Commission, while at the same time rejecting the statistical validity of the Commission's interpretation that the "newer" immigrants are less skilled (Douglas 1919, p. 394–395).⁴ The recommendations appear to have been based on prejudice against immigrants who are not of Northwest European origin, rather than a careful examination of its own data.⁵

The employee survey was limited to production workers in selected mining and manufacturing industries. The sample was selected to over-represent immigrant-intensive industries and immigrants, particularly those from Southern and Eastern Europe. It was conducted primarily in 1909 in 23 states east of the Rocky Mountains which included all of the major industrial states and the primary states of residence for European immigrants.

By limiting the data to wage workers in mining and manufacturing the sample is subject to selectivity bias. That is, the more able (or perhaps the less able) may be in other activities such as farming, the service sector, self-employment, and professional occupations. This bias may vary systematically by ethnicity and duration in the United States, among other variables. For example, the more able may be more likely to be self-employed and this tendency may increase with duration of residence for immigrants. It is not possible using the Dillingham Commission data to analyze sectoral selectivity bias.

For the employee sample, data were collected by the Dillingham Commission on the worker's sex, ethnic group, nativity, wages, age, duration in the United States, marital status, and literacy (ability to read and write in some language), among other variables. Most of the published volumes report studies by industry and include separate tables by gender which present the means and frequency distributions of

⁴Douglas (1919, p. 394–395) is particularly critical of a table in a study by Jenks and Lauck, *The Immigration Problem*, drawn from the Dillingham Commission tables. Douglas writes: "This table apparently proves that the percentage of skilled workers in the old immigration is more than twice as great as in the new.... The table, however, contains certain statistical fallacies. Hebrews are excluded from the classification of the newer immigrants. This gives a hand-picked table, as the Jews are the most highly skilled of the newer races. To omit them from the category of the 'new immigration' would be equivalent to omitting the English or the Germans from the 'old.'" Douglas analyzed the occupational status of immigrants at the time of immigration, but not the Dillingham Commission data from the employee survey.

⁵At the time of the Commission's report the Chinese Exclusion Act and the "Gentlemen's Agreement" with Japan had ended virtually all Asian immigration, but Southern and Eastern European immigration was at an annual rate of over 600,000. The Commission recommended a bar to Asian immigration and a literacy requirement, which were formally adopted in 1917, and quotas for European countries based on the country distribution of earlier cohorts of immigrants. The "national origins" quota system was enacted in 1921 and with modifications remained in effect until legislation in 1965.

An example of the Commission's attitude is expressed in the following paragraph: "The new immigration as a class is far less intelligent than the old, approximately one third of all those over 14 years of age when admitted being illiterate. Racially they are for the most part essentially unlike the British, German, and other peoples who came during the period prior to 1880, and generally speaking they are actuated in coming by different ideals, for the old immigration came to be part of the country, while the new, in a large measure, comes with the intention of profiting, in a pecuniary way, by the superior advantages of the new world and then returning to the old country." (U.S. Immigration Commission (1911), Vol. 1, *Abstract*, p. 14)

personal characteristics (such as age, wages, literacy, etc.) by nativity/ethnicity category.⁶

Even though sampling theory had not yet been developed, the Commission's statisticians were sensitive to the effect of sample size on the reliability of statistics. Data were not reported for a variable when the number of observations in the industry/ethnicity cell was below a pre determined threshold. The threshold was highest for wages, 80 observations. Where data were reported, the sample sizes were indicated.

The Commission "uses the term 'race' in a broad sense," that is, "... the distinction (among groups) being largely a matter of language and geography, rather than one of color or physical characteristics ..." (U.S. Immigration Commission 1911, Vol. 1, *Abstract*, p. 17). As a result the "racial" categories, or what would now be called ethnic groups, included as distinct "races" English, Welch, Irish, Scottish, Northern Italian, Southern Italian, etc. Following the practice of the U.S. Bureau of Immigration, "Hebrews" were viewed as a separate "race" (ethnic) group, and two of the categories for the foreign born were "Hebrew-Russian" and "Hebrew-Other."⁷ The Russian Jewish category refers to all Jews from what was then part of the Russian Empire.⁸

⁶Data on the current occupational distribution of the employee sample are not reported in the Dillingham Commission volumes. The occupational attainment of adult male Jewish immigrants at the turn of the century has been studied using data from the 1900 Census of Population and Russian origin as a proxy for being Jewish (Chiswick 1991a). This analysis revealed that on arrival (i.e., recent immigrants) the Jewish immigrants had a low occupational status, but they experienced very rapid improvements with duration. Other variables the same, parity in occupational prestige scores was reached with Western European and Canadian immigrants at about 5½ years after immigration and with native-born white men at about 14 years duration. The Jewish immigrants at arrival had a higher occupational status than those of non-Jews from Southern and Eastern Europe, and the gap widened with duration in the United States.

⁷In 1899 the Bureau of Immigration began classifying immigrants by race/ethnic origin as well as country of birth because of the ethnic heterogeneity of the immigrants from the Austria-Hungarian, Russian, and Ottoman Empires. This classification was abandoned in 1943 as World War II generated a new sensitivity about racial classifications.

⁸The Dillingham Commission data indicate that those recorded as "Hebrew-Russian" had higher wages and were more highly skilled than those recorded as "Russian," a category which may include some unidentified Jews.

Variable	"Hebrew Russian"	"Russian"
WAGE(\$)	\$12.82	\$11.74
AGE (years)	29.3	29.8
LITERATE(%)	90.4	71.3
MARRIED(%)	67.9	59.6
DURATION (years)	8.6	5.9

This suggests that analyses using Russian-origin as a proxy for turn-of-the-century Russian Jewish immigrants would underestimate the wages and skills of the Russian Jewish immigrants (as was indicated in Chiswick 1991a). It has been shown elsewhere that compared with non-Jews, the Jews in Tsarist Russia exhibited characteristics associated with a higher level of skill – a lower fertility rate, a lower death rate, a later age at marriage, and a higher literacy rate, including literacy in the Russian language (see, for example, Kuznets 1975, pp. 62–82 and Silber 1980).

The Commission reported that the *only* objection to their “racial” (ethnic) classification was directed at the designation of “Hebrew” or “Jewish” as a distinct category. “This objection was voiced by several prominent Hebrews, who contended that the Jews were not a distinct race in an ethnological sense, and that the terms ‘Hebrew’ and ‘Jewish’ rightly refer to a religious sect and not a race.” The Union of American Hebrew Congregations, the institutional arm of Reform Judaism, among other Jewish groups, opposed the separate designation, preferring that Jews be classified solely by country of birth. Others, including Zionists, supported the separate designation. The report includes a tantalizing reference to “a special resolution adopted by the federated Jewish organizations of one of the largest cities” in support of identifying Jews. The Commission also references various Jewish sources, including the *Jewish Encyclopedia*, which refer to Jews as an ethnic group. (U.S. Immigration Commission, (1911), Vol 1, *Abstracts*, pp. 17–20.)

According to the Commission report: “Jewish immigration now exceeds in number annually that of any other race with the exception of the Italian. . . . In the twelve years 1899-1910, 1,074,442 Jewish immigrants were admitted to the United States, a number exceeded by only one other race, the South Italian. Of the total number of Jewish immigrants admitted during the period specified 765,531 came from Russia and 180,802 from Austria-Hungary.”⁹ The Commission noted that the Jews were tied with the Slovak for the highest *rate* of immigration to the United States (in 1907, 18 immigrants per thousand of its European population), and that at this rate Jewish immigration could not continue indefinitely (U.S. Immigration Commission 1911, Vol. 5, *Dictionary of Races of Peoples*, pp. 74–75).

Thus, using the Dillingham Commission data it is possible to analyze systematically the wages of immigrant Jewish workers in manufacturing at the turn of the century. The data are discussed in more detail in the Appendix.

Data Analysis

The Dillingham Commission data on the mean value of the weekly wages, literacy, duration in the United States, and demographic characteristic of Jewish and white non-Jewish adult male production workers in 19 mining and manufacturing industries are reported in Table 5.1. On average, the Jewish weekly wage was \$13.30. This is considerably greater (by 15%) than the \$11.54 for other Southern and Eastern European immigrants, although marginally lower than the \$13.56 (2% lower) received by the immigrants from Northern and Western Europe and Canada, and the \$13.98 (5% lower) received by white men born in the United States.

⁹Kuznets (1975, pp. 36–41) shows that about three quarters of the Jewish immigrants to the United States from 1881 to 1907 were from the Russian Empire and more than half of the remainder were from the Austrian-Hungarian Empire, with a smaller proportion from Romania and less than 2% from other countries. The wave of German Jewish migration was concentrated in the mid-nineteenth century, was smaller in magnitude, and was less involved as production workers in manufacturing.

Table 5.1 Characteristics of white male production workers in mining and manufacturing, by Nativity and Origin, 1909

Characteristic	Weighted means and percents			
	Jewish Immigrants	Other Southern and Eastern Europe	Northwest Europe and Canada ^a	Born in U.S.
WAGE(\$)	13.30	11.54	13.56	13.98
LN WAGE ^b	2.58	2.43	2.59	2.63
AGE (years)	30.2	30.4	39.6	30.8
LERATE(%)	90.6	79.0	94.9	98.4
MARRIED(%)	68.5	62.3	73.0	62.8
DURATION (years)	9.7	7.3	20.2	
No. of Cells	6	129	75	86
No. of Cases	4596	154,179	63,890	122,294

Source: U.S. Immigration Commission, *Reports of the Immigration Commission*, Vols. 6 to 16, *Immigrants in Industries* (1911)

^aOf whom 37.5% are from the British Isles and Canada

^bNatural logarithm of the mean wage in the cell

Compared with non-Jewish Southern and Eastern European immigrants, the Jews were more likely to be able to read and write in some language (90.6% were literate), and had lived in the United States for more years. These factors would contribute to the Jews receiving higher wages than other Southern and Eastern European immigrants. On the other hand, the Jews were less likely to be literate, and certainly had a lower English-language literacy rate, and had been in the United States fewer years than Northwestern European and Canadian immigrants and white native-born men. These differences depress the relative wages of Jews.

Table 5.2 reports the values of the variables under study for each of the six Jewish cells. The only cell for non-Russian Jews is for clothing manufacturing where weekly wages were \$14.90. This is greater than the weekly wages of \$13.28 received by Russian Jews in the same industry. Note, however, that the Russian Jews had a shorter duration in the United States, and a slightly lower literacy rate. The regional distributions (not shown in the table) of the Russian and non-Russian Jewish clothing workers were similar. The Russian Jews in the four other industries received lower weekly wages, ranging from \$12.96 in slaughtering and meatpacking to \$9.11 in woolen and worsted goods (Table 5.2). There is, however, a perfect rank order correlation between weekly wages and duration in the United States for the six Jewish industry categories.

Multiple regression analysis is used to control statistically for the effects of the skill and demographic factors on Jewish-non Jewish differences in weekly wages.¹⁰ Following standard practice, the natural logarithm of wages (LNWAGES) is regressed on literacy (%LITERATE), age (AVER AGE), duration in the United States

¹⁰For an analysis of earnings among low-skilled immigrants in the late twentieth century which explicitly incorporates literacy, see Chiswick (1991b).

Table 5.2 Characteristics of Jewish immigrant production workers in manufacturing by Origin and Industry, 1909 (Means and Percents)

Variable	Russian Jews					Other Jews
	Clothing	Slaughtering and meat packing	Silk goods	Boot and shoe	Woolen goods	Clothing
WAGE(\$)	13.28	12.96	12.21	11.53	9.11	14.90
AGE (years)	29.9	31.6	29.5	25.5	27.3	33.0
LITERATE(%)	88.3	94.0	98.5	97.2	89.5	91.3
MARRIED(%)	69.6	73.2	73.4	55.3	60.3	70.5
DURATION (years)	9.4	7.3	7.0	6.4	5.2	13.1
Cases	2574	189	213	442	133	1045

Source: U.S. Immigration Commission, *Reports of the Immigration Commission*, Vol. 6 to 16, *Immigrants in Industries* (1911)

(DURATION), marital status (%MARRIED), and region of residence (%CENTRAL and %SOUTHERN STATES), as well as a variable for being Jewish (JEWISH).¹¹

The weighted regression for the 210 cells for the foreign born is reported in Table 5.3 column (1), and for comparisons of Jews with other immigrants by region of origin and the native born in Table 5.3, columns (2) to (4). Literacy has a statistically significant effect on wages. The coefficient indicates that a one percentage point increase in the proportion of men in the cell who are literate increases average wages among the foreign born by 0.23% (t ratio is 2.34). The coefficient implies that in principle going from 0 to 100% literate in a cell increases average wages by about 23% - or that the literate have about a 23% earnings advantage over the illiterate.¹² The effect of literacy on wages is larger for Southern and Eastern European immigrants and larger still for the native born.

Wages vary by location. Mining and manufacturing workers in the southern and central states tend to earn more than those in the immigrant-congested northeastern states. This tends to depress the relative earnings of the Jewish immigrants who are concentrated in the northeast. Age serves as a proxy for labor market experience. Earnings increased, although at a diminishing rate, with the average age of the workers in the cell.

¹¹ All of the explanatory variables are expressed as the percentage in the cell with the designated characteristic, except AGE and DURATION in the United States which are cell means, JEWISH which is unity for a Jewish cell, otherwise it is zero, and BRITISH/CANADIAN which is unity for a British or Canadian cell. The equation is a weighted regression, with the number of observations in the cell serving as the weights. This is done to correct for the heteroskedastic residuals that would arise from the unequal number of observations in each cell. Weighted regressions were also used by Blau (1980) and McGouldrick and Tannen (1977), but not by Higgs (1971) in their analyses of the Dillingham Commission data.

¹² This is remarkably similar to the 26% earnings advantage found for those who were literate in a sample taken in 1986/87 of low-skilled immigrants in the Los Angeles labor market (Chiswick 1991b).

The coefficients in Table 5.3 (columns (1) to (3)) indicate that the weekly wages of Jewish wage earners were significantly greater than those of other immigrants, when other variables are the same. The earnings advantage was about 19%

Table 5.3 Regression analysis of weekly wages, adult white male employees in mining and manufacturing, by Nativity, 1909 ^a (Dependent Variable: Natural Logarithm of Weekly Wages)

Variable	Foreign born			Native born White Men and foreign born Jews
	All ^b	Southern and Eastern Europe and Jews	Northwestern Europe and Canada and Jews	
(1)	(2)	(3)		
% LITERATE	0.0023 (2.34)	0.0032 (3.17)	0.0142 (4.00)	0.0474 (6.33)
% MARRIED	-0.0011 (-0.88)	-0.0040 (-2.96)	0.0058 (1.80)	0.0044 (2.02)
AVER AGE	0.2637 (5.92)	0.5511 (4.13)	0.1762 (1.46)	0.0265 (0.44)
AGE SQUARED	-0.0034 (-5.27)	-0.0082 (-3.66)	-0.0036 (-1.71)	-0.0005 (-0.47)
DURATION ^c	-0.0136 (-1.04)	0.0162 (0.76)	-0.0051 (-0.12)	0.0582 (2.12)
DURATION SQUARED	0.0003 (0.54)	-0.0004 (-0.33)	0.0008 (0.64)	^e
% CENTRAL STATES	0.0007 (2.63)	0.0001 (0.40)	0.0013 (2.50)	0.000003 (0.01)
% SOUTHERN STATES	0.0023 (4.59)	0.0016 (3.10)	0.0045 (2.42)	0.0054 (4.69)
BRITISH/ CANADIAN ^d	^e	^e	0.0487 (1.11)	^e
JEWISH	0.1732 (2.70)	0.1349 (2.29)	0.1819 (1.61)	-0.2635 (-0.98)
Constant	-2.540 (-3.59)	-6.796 (-3.50)	-2.283 (-1.18)	-2.726 (-2.83)
R ²	0.56	0.65	0.47	0.46
Adjusted R ²	0.55	0.62	0.40	0.41
No. of cells	210	135	81	92

Source: U.S. Immigration Commission, *Reports of the Immigration Commission*, Vol. 6–16, *Immigrants in Industries* (1911)

^aWeighted regressions. t ratios in parentheses

^bWhen the Jewish variable is replaced by two variables for Russian Jews and Other Jews the coefficients are t ratios are:

	Coefficient	t ratios
Russian Jews (5 cells)	0.1724	2.36
Other Jews (1 cell)	0.1760	1.37

^cRefers to duration in the United States of Jewish immigrants in Column (4). Variable is zero for native born

^dVariable is unity for British and Canadian immigrants in column (3)

^eVariable not entered

(coefficient = 0.1732, t ratio = 2.7) overall, and by region about 14% (coefficient 0.1349, t = 2.3) greater than those of Southern and Eastern European origin, 20% more than non-British/Canadian immigrants from Northwestern Europe (coefficient 0.1819, t = 1.6), and 15% more than Canadian and British immigrants.¹³

Jews even did relatively well in comparison with native-born white men (Table 5.3 column (4)). It appears that Jewish immigrants initially tend to have lower wages than the native born, but the gap narrows sharply with greater experience in the U.S. labor market. The Jewish immigrants reached earnings parity with native-born white men in the selected industries, other variables the same, at only 4.5 years in the United States, after which they had higher earnings.¹⁴

Summary and Conclusions

This chapter has examined the differences in weekly wages of Jewish immigrants and others employed in selected mining and manufacturing industries, as reported in the establishment employee survey conducted in 1909 by the Dillingham Immigration Commission. About 60% of adult male Jewish immigrants were employed as craft, operative, and nonfarm laborers at this time.

The Jewish weekly wage substantially exceeded (by 15%) that of other immigrants from Southern and Eastern Europe, and was only marginally lower than the wages of immigrants from Canada and Northwestern Europe and white native-born men (2 and 5%, respectively). When other variables that influence wages are held constant, the Jewish workers earned 14 to 20% more than other immigrants. They reached parity in weekly wages with native-born white men in these industries after only 4.5 years in the United States, after which the Jews had higher wages.

Thus, the high level of economic attainment of turn-of-the-century American Jewish immigrants was not merely a consequence of self-employment and professional employment. Jewish production workers in manufacturing attained high wages in comparison with other production workers. Furthermore, these data, when

¹³ Tests reveal no significant difference in the effect on wages of literacy or duration in the United States between Jewish and non-Jewish immigrants. There is also no difference in the effect of being a Russian Jew (coefficient 0.1724) or a non-Russian Jew (coefficient 0.1760) when these replace the Jewish variable in the foreign-born equation.

¹⁴ Using the same variables as in Table 5.3 non-Jewish immigrants do not reach earnings parity with the native born even though the gap narrows. The differential is 8% at 10 years of residence and is about 5% at 16 and later years.

In Blau's (1980) regression analysis immigrants reach earnings parity with white native born men at 10 to 15 years residence in the United States. However, she holds constant the percentage speaking English, a consequence of immigrant adjustment, and certain industry characteristics not included in this study. The inclusion of these variables was appropriate as her objective was the study of wage discrimination, not immigrant adjustment. By doing so, however, she reduced the number of cells from the 296 in this study to 202 in her analysis, thereby losing information and statistical precision. Because of missing values for English language fluency the number of Jewish cells would decline from 6 to 4.

combined with the results of other studies, indicate that the high earnings of American Jews relative to other workers with similar characteristics appear to be a phenomenon observed throughout the twentieth century (Chiswick 1991a and 1992, Kuznets 1972, Kahan 1986).

Explanations for this achievement may be found in the writings of Kahan (1986) and Ruppin (1913). Arcadius Kahan (1986, p. 102) wrote, “While the Jewish immigrants from Eastern Europe brought along little money, or physical assets, their value for the U.S. economy, and the source of their expected incomes, consisted of their skill endowment and their ability to employ their skills gainfully.” Writing at the time Arthur Ruppin (1913, p. 51) noted: “In the struggle for life, besides intellectual gifts, the industry, versatility and powers of adaption of the Jew stood him in good stead.... Appreciation of the value of learning and study is a tradition among Jews to an extent unequalled perhaps by any other people.” Both writers are pointing to a greater ability among Jews in the acquisition of skills and in the utilization of their skills in the labor market. Apparently this may have also been the situation for Jewish production workers in manufacturing. The source or sources of this greater skill-acquisition and skill-utilization ability, and the degree of intergenerational transmission, are worthy of future research.

Appendix: Description of the Data

The data for this paper were compiled by Francine Blau from U.S. Immigration Commission, *Reports of the Immigration Commission*, Vol. 6 to 16, *Immigrants by Industries*, Washington: U.S. Government Printing Office (1911). Her description of the procedures is available in Blau (1980).

The survey of employees by industry was conducted primarily in 1909 and in 23 states intensive in mining and manufacturing and with immigrant concentrations. The 19 industries include many manufacturing industries (agricultural implements and vehicles; boot and shoe; cigar and tobacco; clothing; collar, cuff and shirt; cotton goods; furniture; glass; glove; iron and steel; leather; silk goods; and woolen and worsted goods), as well as slaughtering and meat packing, sugar refining, oil refining, bituminous coal mining, copper mining and smelting, and iron ore mining. The 23 states are Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania in the North East; Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Nebraska, Kansas, and Missouri in the North Central states; and Delaware, Oklahoma, Florida, Alabama, Virginia, and West Virginia in the South. It is not possible to identify the city or size of place.

Each industry volume included tables by gender which reported, for various economic and demographic characteristics, the mean value, frequency distribution, and number of cases for “general nativity or race” groups (i.e., nativity, race, and ethnicity). Data were presented only for nativity/ethnicity groups with 80 or more persons reporting for wages and 40 or more persons reporting for most other variables. The nativity/ethnicity classification comprised 60 groups, including native born with a

native-born father (two groups, “white” and “Negro”), native-born with a foreign-born father (15 parental countries of birth), and foreign born (43 ethnicity categories). Two of the foreign-born categories were “Hebrew, Russia” and “Hebrew, Other,” with another category “Russian.” No other groups were defined by religion.

The demographic and socioeconomic variables reported for each nativity/ethnic group by gender include age, location, marital status, literacy, duration the US for the foreign born, and weekly wages, among other variables. Data are not available on the employee’s current occupation. The wage data are for employees age 18 and over. An error in the coding on the data tape for the wages for “Hebrew, Other” men in clothing manufacturing was corrected (correct value \$14.90).

The data analysis in this study included all of the white nativity/ethnicity groups. This excluded from the analysis only the data on U.S.-born blacks and Japanese immigrants. The number of cells for native-born and foreign-born males is greater in this study than in Blau (1980), 296 cells as distinct from her 202. Blau included variables for percentage speaking English and certain industry variables (capital-labor ratio, percent sales growth, average firm size). Missing values for one or more of these variables resulted in her loss of 74 cells. While these extra variables were relevant for her study of discrimination, they were not relevant for the purposes of this study.

The Southern and Eastern Europe group comprises all of the countries in Southern and Eastern Europe, as well as Cuba and Mexico. The Northern and Western European category includes the British Isles, Canada, Scandinavia (except Finland), France, Germany, Belgium and the Netherlands.

Because of an unequal number of observations per cell only weighted means and weighted regression equations are computed.

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Part II

Upward Mobility

Part II, “Upward Mobility,” analyzes the labor market progress of American Jews over the course of the twentieth century in five chapters.¹ The first two chapters (Chaps 6 and 7) focus on their labor market attainment compared to others covering the period 1890 to 2000, using a variety of data, nearly one data source per decade. They are “The Occupational Attainment and Earnings of American Jewry, 1890–1990” and “The Occupational Attainment of American Jewry: 1990 to 2000.” Much of the analysis focuses on men because most women, especially married women, seldom worked outside the household for pay before WWII. Chapter 6 is exclusively on men, covering occupational attainment from 1890 to 1990, and on earnings during this period when the data are available. Chapter 7, covering 1990 to 2000, is an analysis of the occupational attainment of Jews compared to non-Jews for women as well as men.

Much of the analysis uses data on Jews from the US decennial censuses where Russian origin or a traditional Jewish mother tongue (Yiddish, Hebrew, or Ladino) are the Jewish identifiers. Other US government data are from the Billings survey (1890), the Dillingham Immigration Commission (1911), and the March 1957 Current Population Survey (which for the first and only time included a question on religion). Non-governmental data with direct questions on religion are also studied, including the National Opinion Research Center’s General Social Survey and the 1990 and 2000/01 National Jewish Population Surveys.

¹ Jews were always a very small proportion of the US population. The share of Jews in the population increased, largely from immigration, from about 0.6 percent in 1888 to 3.3 percent by 1907, to about 3.7 percent in 1937. Thereafter, the proportion of Jews in the population declined because of the very low Jewish fertility compared to others and the declining share of Jews in the post-WWII increasing immigration stream. By 1950, Jews were about 3.5 percent of the population, declining to about 2.4 percent by 1970 and currently about 2.0 percent. The data in this paragraph are from: <https://www.JewishVirtualLibrary.org/jewish-population-in-the-United-States-nationally>

Chapter 8, the third chapter in Part II, “The Linguistic and Economic Adjustment of Soviet Jewish Immigrants in the United States, 1980–2000” (with Michael Wenz), focuses on the most recent wave of Jewish immigrants, those from the former Soviet Union. Three censuses (1980–2000) are used to identify Jews as immigrants born in the USSR but who do not speak Armenian or Ukrainian at home and are not of Ukrainian ancestry, as they are far less likely to include Jews.

The findings in these three chapters are the same regardless of the data source or the definition of who is a Jew. The Jewish immigrants shortly after arrival have a lower occupational status and earnings, other variables the same, than other immigrants and the native-born. They experience more rapid improvements with a longer duration in the US in their English language proficiency, their occupational status, and their earnings than other immigrants. They eventually surpass the occupational status and earnings of other immigrants, even those from Northwestern Europe, and after not too many years reach occupational and earnings parity with those born in the US. Their children born in the US outperform the native born and even the native born with US-born parents in terms of education, occupation, and earnings.

The Jewish occupational and industrial distribution observed prior to WWII was shaped in part by discrimination against Jews in access to higher education and in employment. Chapter 9, “The Rise and Fall of the American Jewish PhD,” explores one example of how Jews responded to changes in patterns of discrimination through an analysis of the receipt of the PhD degree during the half century after World War II. Jews were identified from a list of Distinctive Jewish Names (DJN). While this undoubtedly underestimated the number of Jews receiving PhDs, it is not obvious that using the DJN technique biased the trends over time.

The PhD has become virtually the “union card” for employment in college and university teaching. Discrimination against Jews in admission to higher education declined after World War II, as did discrimination in the hiring of Jewish college and university professors. Discrimination against Jewish professionals in other sectors of the economy was much slower to decline. Jewish enrollment in PhD programs therefore increased because of both the decline in discrimination in admission to these programs and in the major sector of employment for holders of PhD degrees. With the subsequent increase in employment opportunities for highly educated Jews in other sectors of the economy, the relative attractiveness of the PhD for Jewish men reached a peak and started to decline in the 1970s.

Chapter 10, “The Economics of the Diaspora Revisited” (with Eliezer B. Ayal), addresses a hypothesis regarding the relatively high level of educational attainment of American Jews. The hypothesis states that as a group descendant from those who experienced frequent expulsions and confiscations of property over centuries in Europe, American Jews would tend to avoid investments in fixed assets (such as land) and would prefer investments in portable assets (such as education). The hypothesis implies that Jews would over-invest in education and under-invest in other non-human assets. The analysis shows that the higher rate of return on schooling of Jews and the steeper effect of labor market experience on their earnings is not consistent with the diaspora hypothesis. Moreover, it implies that American Jews would prefer highly transferable human capital (such as medicine) and avoid investments in skills that are not readily transferable (such as law), which also does not seem to be the case.

Chapter 6

The Occupational Attainment and Earnings of American Jewry, 1890 to 1990



Barry R. Chiswick

Introduction

There have been Jews in what is now the United States since at least the seventeenth century (Marcus 1990). The first Jewish immigrants, primarily of *Sephardi* (Spanish, Portuguese) origin, were followed in the early and middle decades of the nineteenth century by primarily *Ashkenazi* German Jewish immigrants (Kohler 1901, Barkai 1986). These immigrant streams paled in comparison to the massive waves of *Ashkenazi* Central and Eastern European Jewish immigration, primarily from Russia and Poland, in the four decades starting in 1881 and ending with the severe immigration restrictions enacted in 1924 (Gartner 1983, Lestschinsky 1966). The predominantly Yiddish-speaking Central and Eastern European immigrants from this period transformed not only American Jewry, but America itself. And of course, they and their descendants were transformed by the Americanization experience.¹ As will be shown below, this is a group which over the course of less

Revision of the original article published in *Contemporary Jewry*, 20(1), 1999, pp. 68–98. Earlier versions of this paper were presented at the Eleventh World Congress of Jewish Studies, Jerusalem, June 1993, the Midwest Jewish Studies Association Annual Meeting, Washington, January 1995, and the Conference on the Economics of Judaism and Jewish Observance, Bar-Ilan University, Ramat Gan, Israel, December 1998. The number of data points increased in successive presentations! I appreciate comments received from Carmel U. Chiswick, Lloyd Gartner, Rela Geffen, Melvin Holli, Tikva Leeker, Evelyn Lehrer, Burton Weisbrod, and participants at the conference presentations, but I am responsible for all errors of omission or commission. I especially appreciate the research assistance of Michael Hurst, Gaston Repetto and Yin Yang.

¹For a recent study of the interaction between the economic progress and religious practice of turn-of-the-century Jewish immigrants, see C. Chiswick 1999.

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than a century went from turn-of-the-century sweat-shop workers, to mid century white-collar sales and managerial jobs and small businessmen, and then to late twentieth century professionals (many of whom are self-employed), an achievement apparently unsurpassed by any other group. This paper presents the first systematic time series for occupational attainment, self-employment status and earnings on American Jewish men. It brings together in a systematic way otherwise scattered material, and adds new data only recently made available. The paper develops data on male occupational attainment, self-employment status and earnings that, to the extent possible, are comparable between Jews and non-Jews at a point in time and across time, showing the relative economic status of Jewish men and white non-Jewish men from 1890 to 1990. The data analyzed are drawn from a variety of censuses and surveys conducted at various points in time over this period.² These data and analyses not only provide quantitative confirmation of the qualitative accounts, both contemporary and historical, in works of fiction and non-fiction, of the economic achievement of American Jewry, but also yield different kinds of subtleties than are available in the qualitative accounts.

The data sources used in this study are discussed first and are summarized in Table 6.1. The next section discusses the data in Table 6.2 on the occupational attainment and self-employment status of adult Jewish men compared to adult white non-Jewish men from 1890 to 1990. This is followed by a discussion of comparative data on earnings. The chapter closes with a summary and some conclusions.

Data Sources

There are very limited data for the systematic study over time of the occupational attainment and earnings of the Jews of the United States. This section first discusses the indirect Jewish identifiers available in Census data from 1900 to 1970. It then discusses the non-census data sources with direct Jewish identifiers, but with smaller sample sizes, that extend the time series backwards in time to 1890 and forward in time to 1990. It closes with a brief discussion of sources for the data on earnings.

Decennial Census Data

The decennial census has asked for the occupation of workers in every census since 1850 and has asked earnings or income since 1940.³ There is, however, no direct mechanism for identifying Jews in census data. The decennial census has never included a question on religion. Moreover, a response to the question on ancestry or

²Readers interested in the technical details are referred to the original research papers listed in the references for a further discussion of most of the individual cross-sectional data.

³See U.S. Bureau of the Census (1989) for a facsimile of the decennial census questionnaires from 1790 to 1990.

Table 6.1 Summary characteristics of data for analyses of adult white men, Jews and Non-Jews, 1890–1990

Period	Data set	Identification of Jews	Comments	Population ^a
<i>Primarily German-origin Jews</i>				
1890	1890 Census office survey, <i>Vital Statistic, of the Jews in the United States</i> (Billings Report) 1890 Census of population	Direct Jewish identifier. Based on lists from “presidents and rabbis of congregations in different parts of the country”	Ages 15 and over. Data on occupation. No data on income or earnings Tables from the 1890 survey of 10,618 Jewish families, U.S.-born and foreign-born Jews living in the U.S. in 1885	0.2 million 0.5 percent (1880) 0.4 million 0.6 percent (1888)
<i>Primarily East European Jewish Immigrants</i>				
1900	1900 Census of population Approx. 1/750 sample	Person or at least one parent born in Russia or Russia/Poland	Ages 18–64 years. Data on occupation. Occupational prestige score. No data on income or earnings	1.1 million 1.4 percent (1900)
1909	Dillingham Commission Report (1911). Grouped data from cross-tabulations of socio-economic characteristics by ethnicity for selected states and industries	Foreign born reporting “Hebrew” origin/ethnicity	All ages. Data on weekly wages. Production workers in selected immigrant-intensive mining and manufacturing industries and states	1.8 million 2.0 percent (1907)
1910	1910 Census of population. 1/250 sample	Yiddish mother tongue of respondent or of a parent of respondent ^b Russian origin – Respondent or a parent born in Russia or Russia/Poland	Ages 18–64 years. Data on occupation. Occupational prestige scores added to data file. No data on income or earnings	–
1920	1920 Census of population. 1/200 sample	Yiddish mother tongue of respondent or of a parent of respondent ^b Russian origin – Respondent or a parent born in Russia or Russia/Poland	Ages 25–64 years. Data on occupation. No data on income or earnings	3.4 million 3.3 percent (1917)
<i>Transitional period</i>				
1940	1940 Census of population. 1/100 sample of households	Yiddish, Hebrew or Ladino mother tongue of respondent ^b	Ages 25–64 years. Sample line person. Data on occupation	4.1 million 3.7 percent (1937)

(continued)

Table 6.1 (continued)

Period	Data set	Identification of Jews	Comments	Population ^a
Early post-WWII	Parents of respondents in the General Social Surveys (1972–87)	Respondent's religion at age 16	Characteristics of parents when GSS respondent was age 16. Data on father's occupation	5.0 million 3.5 percent (1950)
1950	1950 Census of population. 1/100 sample	Russian origin-respondent or a parent born in Russia or Russia/Poland	Ages 25–64 years. Data on occupation	5.0 million 3.5 percent (1950)
<i>Primarily U.S.-born Jews</i>				
1957	Current Population Survey, March 1957. Group data from cross-tabulations of socioeconomic characteristics by religion	Current religion	Ages 18 and over. Data on occupation and median income	5.5 million 3.1 percent (1960)
1960	1960 census of population. 1/100 sample	Yiddish or Hebrew mother tongue if respondent is foreign born ^b Russian origin – Respondent or a parent born in Russia or Russia/Poland	Ages 25–64 years. Data on occupation	5.5 million 3.1 percent (1960)
1970	1970 Census of population, 15 percent questionnaire. 1/100 sample	Yiddish, Hebrew or Ladino mother tongue of respondent ^b	Ages 25–64 years. Data on occupation and earnings. Second-generation Americans	5.9 million 2.9 percent (1970)
1972–1987	Respondents in the General Social Surveys (1972–87)	Respondent's religion at age 16	Ages 25–64 years. Data on occupation and earnings Samples taken over 15 years centered on 1980	5.9 million 2.7 percent (1979)
1990	National Jewish Population Survey, 1990 1990 Census of population, 1/1000 sample	Religion at birth in NJPS	Ages 25–64 years. Data on occupation but not on individual income or earnings in the NJPS	5.5 million 2.2 percent (“core Jews”) (1990)

Notes:

Sources for Data Sets:

1890: a) John S. Billings, *Vital Statistics of Jews in the United States*. Census Bulletin No. 19, Washington, DC, December 30, 1890b) *Report on Population of the United States at the Eleventh Census: 1890, Part II*, Census Office, Washington, DC, 1897

(continued)

Table 6.1 (continued)

- 1900: *1900 Census of Population, Public Use Sample*, Center for Studies in Demography and Ecology, University of Washington, 1980
- 1909-. U.S. Immigration Commission, *Reports of the Immigration Commission*, Vol. 1 to 41, Washington, DC: U.S. Government Printing Office, 1911. (Dillingham Commission Report)
- 1910: *1910 Census of Population, Public Use Sample*, Population Studies Center, University of Pennsylvania, 1989
- 1920: *1920 Census of Population, Public Use Sample*, Minnesota Historical Census Project, University of Minnesota, Minneapolis, January 1998
- 1940: *1940 Census of Population, Public Use Sample*, U.S. Bureau of the Census 1983
- Post WWII: (Same as 1972–1987)
- 1950: *1950 Census of Population, Public Use Sample*, U.S. Bureau of the Census 1983
- 1957: U.S. Bureau of the Census, “Tabulations of Data on the Social and Economic Characteristics of Major Religious Groups, 1957” (mimeo, no date)
- 1960: *1960 Census of Population, Public Use Sample*, U.S. Bureau of the Census 1973
- 1970: *1970 Census of Population, Public Use Sample*, U.S. Bureau of the Census 1973
- 1972–1917: National Opinion Research Center, *General Social Surveys, 1972–1987, Cumulative Data File*, NORC: Chicago, 1987
- 1990: a) *National Jewish Population Survey, 1990*, North American Jewish Data Bank, Graduate Center, City University of New York, 1991
- b) *1990 Census of Population, Public Use Sample*, U.S. Bureau of the Census 1993

Sources for size of Jewish Population:

Sidney Goldstein, “Jews in the United States: Perspectives from Demography” *American Jewish Year Book*, 1981 Vol. 81, New York: American Jewish Committee, 1983, p. 9, Table 6.1

Barry Kosmin, et al., *Highlights of the CJF 1990 National Jewish Population Survey*, New York: Council of Jewish Federation, 1991, p. 6, Table 6.1

^aDefinition of who is a Jew may differ from that of data set under study and across time

^b“Mother tongue” in 1910 and 1920 is the customary speech in the homes of the immigrants before immigration, in 1940 and 1970 it is the language spoken at home other than or in addition to English when the respondent was a child, and in 1960 it refers to the language spoken in the home before the respondent immigrated to the United States

ethnicity introduced in the 1980 Census that would indicate a respondent’s religion is masked by the Census Bureau coding procedures.

Two indirect methods are employed for identifying Jews in Census data (Table 6.1).⁴ One is the “Russian-origin technique” in which individuals are identified as Jewish if they or at least one parent were born in Russia or Russia/Poland, as distinct from other Poland designations (Rosenthal 1975, Kobrin 1983). The Census first asked the respondents for their country of birth in the 1850 Census and parent’s specific birthplace was asked from the 1880 Census until the 1970 Census (U.S. Bureau of the Census 1989). There were few immigrants from the Russia and the Russia/Poland area before the large-scale Jewish immigration began in the 1880s, and it was largely ended by the immigration restrictions of the early 1920s, until resumed in recent years.

⁴In principle, the “distinctive Jewish name” technique could also be applied to the original census manuscript records for 1920 and earlier censuses, which are available 72 years after the census is conducted. This approach is costly and is not without significant error. See, for example, Sheskin 1998.

This technique misses the identification of Jews from Germany, Central Europe and other areas other than Russia, as well as Jews of Russian origin whose grandparents immigrated to the United States. Moreover, the Russian origin technique incorrectly identifies as Jewish persons who are not of Jewish origin but who report they or their parents were born in Russia or Russia/Poland.

The second method for identifying Jews in census data is the “traditional Jewish language technique” (Kobrin 1983, Rosenwaik 1971). Those who report a traditional Jewish language as their “mother tongue” are most likely to be Jewish; few non-Jews would speak these languages. A language question of one sort or another has been asked in most of the censuses since 1890 (U.S. Bureau of the Census 1989). There was a question on mother tongue from 1910 to 1970, except for 1950, sometimes only of the foreign-born, sometimes of all respondents, and sometimes of the respondent and his or her parents.⁵ Mother tongue is defined in various censuses as the “native language,” the first language learned, or a language other than English spoken in the home when the respondent was a child (U.S. Bureau of the Census 1989). In the 1980 and 1990 Censuses the question on mother tongue was replaced by a question on languages other than or in addition to English currently spoken in the home, other than just a few words.

The traditional Jewish languages that have been coded on the microdata files of the decennial census are Yiddish, the traditional language of Central and Eastern European *Ashkenazi* Jews, Hebrew, the language of religious practice, and Ladino, the traditional language of some Mediterranean basin *Sephardi* Jews. For the early period only Yiddish is identified, while in the post war period all three are identified. Most respondents reporting a traditional Jewish language were Yiddish speakers.

While very few, if any, non-Jews would report a traditionally Jewish language as their mother tongue, many Jews would report a mother tongue that was not a traditional Jewish language, such as German among German Jewish immigrants and English among the native born. With the sharp decline in immigration after the severe 1924 immigration restrictions and with the passage of time during the twentieth century the descendants of the large cohort of Yiddish-speaking Jews of Central and Eastern European origin were increasingly native born with native-born parents, and Yiddish is no longer spoken in the home. Moreover, for a variety of reasons, Jewish immigrants in recent decades have been speaking the primary language of their country of origin, rather than a traditionally Jewish language, except, of course, the Hebrew-speaking immigrants from Israel.

Even with the creation of microdata files from the census manuscript records, there is no variable that can serve as an indirect or proxy identifier of Jews in the censuses prior to 1900.⁶ Although most Jews coming to the United States in the early and mid-nineteenth century were German Jews, they were a small proportion

⁵In the 1910 Census the mother tongue question was not on the census form, but enumerators were instructed to record in the same space as birthplace the mother tongue of any foreign born respondent or foreign-born parent of the respondent (U.S. Bureau of the Census 1989).

⁶This was originally published prior to the creation of the 1860 Census PUMS file used in Chap. 2 of this volume where Jews are identified using the Distinctive Jewish Name (DJN) technique.

of all German immigrants. The large-scale immigration of Russian Jews began in the early 1880s, but a nationwide microdata file from the 1890 Census cannot be created because of the loss of many of these original manuscript records in a fire.

Thus, the 1900 Census of Population is the first decennial census in which it is possible, to a first approximation, to study East European (Russian and Russian/Polish) Jewish immigrants. For the 1910 and 1920 Censuses both the Russian-origin and Yiddish-mother tongue techniques can be applied.⁷ Neither technique is ideal, but by comparing the results of using both procedures additional insights are provided on Jewish immigrant occupational attainment in the early part of this century. The microdata files of the 1930 Census of Population were not yet produced at the time of the writing of this paper.

The Census data can also be used to analyze Jewish occupational attainment at mid-century, 1940–1970, but there is no mechanism for identifying Jews, or a large subset of Jews, in later censuses. The traditional Jewish language technique is applied in 1940, 1960 and 1970, using Yiddish, Hebrew and Ladino as the designated languages; Mother tongue was not asked in the 1950 Census. For 1940 both the native born and foreign born Jews are studied, but in 1960 only the foreign-born were asked the language question, and for 1970 the analysis is limited to second-generation Americans, that is, to those who were native born with at least one foreign-born parent (Chiswick 1983). Few third and higher order generation American Jews would have been raised in a home in which there was a mother tongue other than English. The Russian origin technique, in which the respondent or a parent of the respondent was born in Russia or Russia/Poland, is applied to the 1950 and 1960 Censuses.

Survey Data

Perhaps the earliest systematic data on Jewish occupational attainment in the United States are available in the Billings Report, *Vital Statistics of Jews in the United States* (Billings 1890). This report is based on a survey of 10,618 Jewish families (60,630 individuals) living in the United States for five or more years as of the survey date, December 31, 1889, just a few months prior to the 1890 Census.⁸ The data on occupational attainment published in the Billings report can be compared with

⁷Both techniques as well as other techniques are used in Ritterband's (1998) estimate of the New York Jewish population over the twentieth century.

⁸The 1890 survey of Jews relied on lists of Jews provided by "presidents and rabbis of congregations in different parts of the country" (Billings 1890, p.3). This would result in an undersampling of non-affiliated Jews and, in particular, Jews living in rural and smaller communities where they would not have contact with officials of congregations and other Jewish institutions. Moreover, it is not clear from the report if the congregations and the names on the lists they provided were "randomly" sampled. For an analysis of the Billings Report survey and the data on occupation, see Chapter 3 or Chiswick (2001).

the data on the occupational attainment of the white native-born and foreign-born populations published in the bound volumes from the 1890 Census.⁹

Because the 1890 survey of Jews was limited to those living in the United States for five or more years as of December 31, 1889, most of the respondents were of German-Jewish origin. The only table on origin in the report is on mother's country of birth.¹⁰ Among the family members age 15 and over, 66.2 percent reported their mother's birthplace to be Germany, 9.8 percent reported the United States, 15.8 percent reported Russia/Poland, and 8.2 percent reported all other areas or country not reported (Billings 1890, Table 6.2). The proportion with mothers born in Germany increases with the age of the respondent. Thus, many of those reporting a U.S.-born mother are also of German-Jewish origin, that is, with a German-born grandparent.

In 1911 the Dillingham Immigration Commission, named after its chair who was a Senator from Vermont, issued a 41-volume report on immigration (U.S. Immigration Commission 1911). The Report included detailed statistical material, including the results from a survey of employers conducted in selected immigrant intensive manufacturing and mining industries in selected immigrant intensive states. Although no data were reported on occupational attainment or distribution, the Report does include tables by industry on the weekly wages of production workers by "race" (ethnicity) for immigrants and for the native born. Jews are identified as "Hebrew-Russian" and "Hebrew-Others." Thus, the weekly wages of Jewish immigrant production workers can be compared to those of non-Jewish white male immigrants and white males born in the United States. For a detailed analysis of the earnings data see chapter 5 or Chiswick (1993b).

The Current Population Survey (CPS) is a monthly survey conducted since 1947 by the U.S. Bureau of the Census for the Bureau of Labor Statistics (BLS), U.S. Department of Labor. The primary purpose of the CPS is the collection of data on the current status of the labor force, and in particular on employment and unemployment. In March 1957, for the first and only time, the CPS questionnaire included a question on religion, asking the respondents their current religion. Although one report was published indicating the distribution of religious affiliations by demographic characteristics, the socioeconomic characteristics of the population by religious affiliation are apparently available only in "unpublished" tables generated by the Census Bureau (U.S. Bureau of the Census 1958 and mimeo, n.d.). These include a table on the occupational distribution of the labor force by religion as of March 1957 (Goldstein 1969, Chiswick 1985).

⁹An extensive search has failed to find the original data used in the Billings Report. No nationwide microdata file can be created from the 1890 Census because fire destroyed most of the original manuscript records (Blake 1996).

¹⁰The text reports data on the nativity and duration in the U.S. of the family heads: 12.5 percent were born in the U.S., 77.8 percent were foreign born who had been in the U.S. 15 or more years, 2.1 percent from 10 to 15 years, 5.2 percent from 5 to 10 years, 1.2 percent under 5 years, and for 1.2 percent duration in the U.S. was unknown (Billings 1890, p. 5).

Table 6.2 Occupational distribution (percent) of Jews and Non-Jews, 1890–1990^a (Adult White Men)^b

	1890				1900				1910				
	Jews		Non-Jews		Jews		Non-Jews		Jews		Non-Jews		
	D	FB	NB	FB(R)	FB	NB	FB(R)	FB	NB	FB(Y)	2G(Y)	FB	NB
Occupation													
Prof/tech ^c	4.6	1.4	3.2	2.3	2.5	4.1	2.3	2.3	3.6	10.5	2.6	5.3	
Managerial	2.8	7.1	6.2	8.2	6.2	6.1	3.4	6.0	22.3	5.6	3.0	4.6	
Clerical	19.5	3.1	5.8	1.5	2.2	4.4	1.4	2.5	31.7	20.3	2.1	6.2	
Sales	56.7	1.8	2.1	7.6	3.1	4.2	16.6	27.1	100.0	31.5	6.8	10.1	
Service	0.7	2.6	2.0	2.6	3.8	2.5	2.2	2.4	100.0	2.1	5.8	3.7	
Craft	11.5	19.8	13.1	19.0	18.6	13.7	27.1	31.7	100.0	12.6	25.1	18.2	
Operative ^d	NA	19.6	12.4	17.3	16.7	9.6	20.3	22.3	100.0	14.7	17.6	14.8	
Laborer ^e	0.5	19.7	9.0	22.8	23.3	12.8	22.1	3.6	100.0	2.8	23.5	8.1	
Agriculture ^f	2.1	24.9	46.2	11.1	19.9	38.2	4.0	0.5	100.0	0.0	13.1	28.7	
Not reported ^g	1.7			7.7	3.8	4.8	0.3	0.2	100.0	0.0	0.4	0.3	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Self-Employed ^h (percent)	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	(25.9)	(38.4)	(38.4)	(16.1)	(22.3)	(35.5)	
1920													
Jews													
Occupation	FB(R)	FB(Y)	2G(R)	2G(Y)	Non-Jews				Jews		Non-Jews		
Prof/Tech ^c	3.3	4.1	8.8	9.8	FB	NB	FB(Y)	2G(Y)	FB	NB	FB	NB	
Med (MD, DDS)	0.7	0.7	1.6	0.8	2.6	5.2	6.0	14.9	3.9	6.3	3.9	6.3	
Law	0.3	0.3	2.3	3.3	0.3	0.9	1.2	2.9	0.3	0.8	0.3	0.8	
Col & U Teach	--	0.1	--	--	0.1	0.6	0.9	3.5	0.2	0.5	0.2	0.5	
Other P, T, & K	2.3	3.0	4.9	5.7	0.0	0.1	0.0	0.0	0.1	0.2	0.1	0.2	
Managerial	21.3	28.8	23.1	29.1	2.2	3.7	3.9	8.5	3.3	4.8	3.3	4.8	
Clerical	1.0	1.5	7.3	9.8	8.1	9.8	28.4	22.2	11.0	10.7	11.0	10.7	
Sales	6.2	9.4	17.7	23.8	2.1	5.5	4.1	14.6	3.9	8.0	3.9	8.0	
					2.7	5.4	13.2	20.3	3.2	5.7	3.2	5.7	

(continued)

Table 6.2 (continued)

	1890				1900				1910			
	Jews		Non-Jews		Jews		Non-Jews		Jews		Non-Jews	
	2.5	2.6	1.3	2.1	2.1	5.0	2.9	3.0	2.2	9.2	4.6	
Service	22.2	25.6	12.0	10.3	10.3	21.7	18.6	19.9	9.8	23.0	16.9	
Craft	21.8	21.3	9.6	11.5	11.5	20.0	11.4	22.6	13.5	21.8	17.9	
Operative ^d	12.9	2.8	4.2	1.2	1.2	20.8	8.5	1.9	1.8	15.1	10.2	
Laborer ^e	5.6	0.7	14.0	0.0	0.0	12.7	28.9	0.3	0.0	8.3	19.5	
Agriculture ^f	3.2	3.2	2.1	2.5	2.5	4.7	3.9	0.7	0.6	0.3	0.4	
Not reported ^g	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Self-Employed ^h (percent)	(37.3)	(45.5)	(39.5)	(32.8)	(32.8)	(21.8)	(36.8)	(41.4)	(27.0)	(21.2)	(27.3)	
Early post-WWII					1950				1957			
Occupation	Jews		Non Jews		Jews		Non-Jews		Jews		Non-Jews	
	D				FB(R)	2G(R)	FB	NB	D			
Prof/Tech ^e	13.8		8.8		7.4	15.7	5.4	7.9	20.3		10.3	
Med (MD, DDS)	2.5		0.9		1.2	2.5	0.6	0.7	n.a.		n.a.	
Law	3.5		0.6		0.8	1.6	0.2	0.5	n.a.		n.a.	
Col & U Teach	1.1		0.4		0.2	0.4	0.2	0.2	n.a.		n.a.	
Other P, T, & K	6.7		6.9		5.1	11.1	4.4	6.5	n.a.		n.a.	
Managerial	44.9		14.8		26.6	24.5	12.1	11.2	35.1		13.6	
Clerical	3.9		3.6		3.1	7.1	3.4	6.2	8.0		7.1	
Sales	12.0		4.7		9.8	14.5	3.9	6.2	14.1		5.6	
Service	1.4		4.0		4.8	3.3	9.0	4.3	2.3		5.4	
Craft	13.1		24.6		14.0	10.7	22.2	20.9	8.9		21.4	
Operative ^d	9.9		17.0		16.2	10.0	19.5	18.1	10.1		20.7	
Laborer ^e	0.7		5.3		3.6	4.0	9.0	5.5	0.8		6.1	

Agriculture ^f	0.4	17.4	4.1	4.4	5.6	12.1	0.2	9.8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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n.a. = Category not available or not separately identified In source

Sources: See Table 6.1

Table 6.2 (continued)

^asee Table 6.1 for the definition of Jews and summary characteristics of the samples. The data for non-Jews from the 1890 and 1990 Censuses include Jews and the other data on non-Jews include Jews who could not otherwise be identified in the source and deleted from the non-Jewish data. The 1910, 1920, 1940 and 1970 Census data on non-Jews excludes Jews defined by mother tongue, while the 1950 and 1960 Census data on non-Jews excludes Jews defined by Russian origin. Detail may not add to total due to rounding

^bNative refers to foreign born (FB), native-born (NB) and second generation (2G) (native born with at least one foreign born parent). D = Direct Jewish identifier (definition varies by source); R = Russian Origin; Y = Jewish Mother Tongue (Yiddish in 1910 and 1920, Yiddish, Hebrew or Ladino in 1940, 1960 and 1970)

^cProfessional, technical and kindred workers

^dIncludes operative transport workers. Includes the Armed Forces (except officers) in all years other than 1890, when they are included in service occupations

^eLaborers excludes farm laborers, except for 1970 Census

^fAgriculture includes farmers, farm managers and, except for 1970 Census, farm laborers

^gIncludes no occupation reported, occupation not classified and for the 1900 Census miscellaneous occupations for which occupational prestige scores could not be computed

^hPercent self-employed is self-employed (including unpaid family workers when they are identified) as a percent of all workers, except 1957 CPS data where the self-employed are defined as self-employed professional, technical and kindred workers, self-employed non-farm managers, and farmers and farm managers. Self-employed may be recorded in any occupation

Another source of data for studying the occupational attainment of American Jews is the General Social Survey (GSS), conducted by the National Opinion Research Center (1987). The GSS is an independent random probability sample taken nearly every year since 1972 of about fifteen hundred adults. The data file studied here (1972–1987) is centered on 1980. In addition to asking the respondents numerous questions about their own demographic and socioeconomic characteristics, they were asked their religious preference currently and at age 16. Religion at age 16 is used to identify Jews, as this is less likely than current religion to be influenced by current economic status.¹¹ This provides a wealth of data on adult Jews and non-Jews in the U.S. labor market for the period around 1980. A major limitation of the GSS, however, is the small sample size for adult Jewish men, about 150 observations for 1972–1987.

The GSS also asked the respondents numerous questions regarding the demographic and socioeconomic characteristics of their parents when they, the respondents, were age 16. Parental religion is not reported in the GSS, but it is assumed that the parent's religion was the same as the respondent at age 16. Since the sample is centered on 1980 and the average age of the adult respondents was 42, the reports regarding their fathers and mothers refer to the early 1950s or early post World War II period. Because the respondents in the GSS include an equal number of randomly selected males and females, the sample of fathers is about double that of the male respondents (about three hundred observations on fathers). For a detailed analysis using the GSS of the schooling, occupational attainment and earnings of the Jewish respondents and the schooling and occupational attainment of their fathers in comparison with non-Jews, including an analysis of intergenerational mobility, see Chiswick (1993a, and 1992).

The National Jewish Population Survey (NJPS), conducted in 1990, is a national random sample of 2441 respondents living in households in which one or more persons was Jewish or of Jewish origin, using a broad definition of Jewish origin or ethnicity. The NJPS asked a wide range of questions about demographic, religious and socioeconomic characteristics and behavior. It has the advantages of a high quality data set with direct Jewish identifiers and a relatively large sample of Jews. The question on the religion at birth of the respondent is used to identify Jews for this study. For an analysis of the skills and socioeconomic characteristics of Jews in the NJPS, see Chiswick (1997).

A limiting feature of the NJPS is the absence of a random sample of non-Jews. There are non-Jews in the data, as the sample includes individuals who were but are no longer Jewish, as well as non-Jewish individuals living in the household with a Jewish respondent. Yet this cannot be considered a random sample of non-Jews. Data from the 1990 Census of Population on white men are

¹¹ Using data from the 1990 National Jewish Population Survey, based on the difference in responses to the questions on current religion and religion at birth, it is found that among men those who left Judaism are more highly educated and those who became Jewish are less highly educated than those born Jewish who remained Jewish (Chiswick 1997).

used here as the non-Jewish comparison group. Although it would be preferable to restrict this analysis to non-Jews, with the absence of a reliable Jewish identifier in the 1990 Census this is not possible. Considering that Jews are less than 3 percent of the white population of the U.S., the inclusion of Jews in the data with non-Jews has only a trivial effect on the occupational distribution of adult white non-Jewish men. Moreover, their inclusion in the 1990 Census data on non-Jews would tend to bias downward the observed Jewish-non-Jewish differences.¹²

Data on Earnings

Some of the sources identified above include data on the earnings of the respondents, thereby permitting a comparative analysis of the earnings, other things being the same, of Jewish and non-Jewish men. This augments the comparative analysis of occupational attainment. The earnings data are available for 1909 in the Dillingham Commission Report, in the 1940 Census for the wage, salary and commission income of wage and salary workers, in the 1957 CPS for median income after standardizing for several characteristics, and in the 1970 Census and the GSS sample of respondents for the wage, salary and self-employment income of those with non-zero labor market income.¹³ Unfortunately, the only income question in the 1990 NJPS was on household income.¹⁴

Changing Economic Status Over Time

In this section the data reported in Table 6.2 on the occupational attainment and self-employment status of adult Jewish men are compared to those of non-Jewish men. In addition, the comparative analysis of earnings is included in this discussion. The data are analyzed chronologically.

¹²A similar situation exists using the 1890 Census. For all other data sources identified Jews are deleted from the total sample to obtain the data on “non-Jews,” which includes non-Jews and unidentified Jews.

¹³The adult GSS respondents were not asked their father’s earnings when they were youths. There were no questions on earnings in the censuses prior to 1940 or in the special 1890 survey of Jews. The income data in the 1950 and 1960 Censuses are not studied in this paper.

¹⁴The NJPS 2000 included asking respondents their individual labor market earnings and occupation, in addition to the household’s income.

Primarily German Origin Jews – 1890

The 1890 Billings Report survey of Jews in the United States for at least five years was primarily of Jews of German origin (Table 6.1). The data indicate they were highly concentrated in sales occupations (Table 6.2). Over half (56.7 percent) of the Jewish men surveyed were in wholesale and retail trade, including peddling, in contrast to 2 percent for all white foreign-born and white native-born men. Clerical occupations were the second most common, employing one-fifth (19.5 percent) of the Jews, far more than among the general population of foreign born (3 percent) or native born (6 percent) men. Nearly 5 percent of the Jewish men were in professional and technical occupations, a higher proportion than even the white native-born (3 percent). Although craft occupations employed 11.5 percent of the Jews, this was less than the proportion among non-Jews. Few of the Jews were in service, laborer or agricultural employments (3 percent), occupations that employed two-thirds of the white foreign-born and native-born men. Thus, the occupational distribution in 1890 of Jewish men who had been in the U.S. at least five years was narrowly concentrated in sales and to lesser extent clerical jobs.¹⁵

East European Jewish Immigrants – 1900 to 1920

The adult male East European Jewish immigrants in the 1900 Census had a different occupational distribution than earlier Jewish residents or the general population, although the differences were smaller between the foreign-born Jews and other immigrants (Table 6.2). In 1900, relatively few of the Jews were professionals, 2 percent of the Jews compared with 4 percent for the native-born. Compared with the native born, Jews had a higher proportion in managerial, sales, craft, operative and laborer jobs, but were under-represented in clerical and agricultural occupations. Using an occupational prestige score to combine the occupational categories into a single quantitative (continuous) index the prestige score for Jews (20.7) differed by little from the score for all white male immigrants (19.6), but was significantly lower than the value for the native born (23.5) (Chiswick 1991).

A major disadvantage experienced by the Eastern European Jewish immigrants in 1900 was the recency of their arrival. On average they had been in the U.S. only 10 years compared with 19 years for other male immigrants. The Jews apparently responded more rapidly than others did to the opportunities for occupational advancement. In particular, the occupational status of the Jewish immigrants increased sharply with their duration in the United States. Other variables the same, compared to other Southern and Eastern European immigrants, Jews began their work experience in the U.S. in occupations with a higher prestige score (+1.7 points)

¹⁵ For an interesting article on the middle class status of German Jewish women in the U.S. in the 1890's, see Berrol 1985.

and the gap in prestige scores increased with their duration. Compared with white non-Jewish Canadian and Northwest European immigrants, an initial disadvantage in occupational prestige scores (-2.7 points) quickly disappeared (by 5.5 years in the United States), turning into a higher Jewish occupational status for those in the U.S. for more than 6 years. Compared with native-born white men, a large occupational disadvantage (measured by prestige scores) shrank with their duration in the United States, with a catch-up in occupational status at about 14 years in the United States. That is, by 1900 Jewish male immigrants who arrived in around 1885 had reached prestige score parity, *ceteris paribus*, with native-born white men (Chiswick 1991).

The occupational distribution in 1910 of Jews defined by the Russian-origin technique is similar to that in 1900, except for the larger share in sales and craft occupations and the smaller proportion in laborer and agricultural occupations, reflecting an increase in occupational status. (Table 6.2). Some significant differences emerge in the 1910 Census comparing foreign-born males identified as Jews using the Yiddish mother tongue and Russian-origin methods. Among those with a Yiddish mother tongue (that is, Yiddish was their native language or that of at least one of their parents), a larger proportion are in managerial, sales and craft occupations and a smaller proportion are laborers or in agriculture. These differences reflect the removal from the data of the lesser-skilled non-Jewish Russian and Russian/Polish immigrants, and the inclusion in the data of Yiddish-mother tongue Jews from Central Europe and other parts of Eastern Europe.

The 1920 Census data on occupational distributions for Jews are reported in Table 6.2 using both the Yiddish mother tongue and the Russian-origin techniques. There was a large immigration of Eastern European Jews in the decade 1909 to 1919, and an increasing number of young adult Jews were the native-born sons of late nineteenth Century immigrants. The data show the continued dissimilarity in the occupational distributions of Jews defined by Yiddish-origin and Russian-origin, the latter being more heavily represented in lower skilled jobs, particularly in laborer and in agricultural jobs. Yet, for the same technique for identifying Jews, the data show a modest improvement from 1910 to 1920 in their occupational status.

Under either definition of “who is a Jew” in the 1910 or 1920 Censuses, Jews were more heavily represented in sales and craft occupations than were either the white foreign-born or native-born men. These differences are greater using the Yiddish-origin rather than the Russian-origin technique.

A question arises as to whether the very rapid improvement in the occupational status of turn-of-the-century Eastern European Jewish immigrants merely reflects their preference for managerial activities in small retail and manufacturing businesses over wage employment, as distinct from a real improvement in economic well-being. Although data on wages, earnings and income are scarce at this time, this issue can be addressed by the data collected by the Dillingham Immigration Commission (1911).

Overall, Jewish production workers in the Dillingham Commission data had higher weekly wages than other Southern and Eastern European immigrants (15.3 percent more), but less than Northwest European immigrants (2 percent less) and less than the native born (5 percent less) (Chiswick 1993b). Duration in the U.S. had a larger effect on wages among Jews than among other immigrant groups. The Jewish production workers, when other variables are the same, had higher weekly wages than other immigrant groups (by 15–20 percent). They had wages on a par with the native born after only 5.5 years in the United States, and had higher wages thereafter. Thus, it appears that the improved economic status of turn-of-the-century Jewish immigrants was shared widely, whether measured by occupational attainment or by the earnings of production workers. Yet it will be seen that turn-of-the-century Jewish immigrants made large investments in their own human capital and that of their children.

The 1900 and 1910 Censuses and the 1909 Dillingham Commission data showed lower levels of literacy (in any language) among Jews than among the native-born and other immigrants. In the 1900 Census, for example, the literacy rates for males were 78 percent for foreign born Jews, 90 percent for all of the foreign born (most of whom were from Northwestern Europe), and 96 percent for adult white native-born men. The Jewish immigrants invested heavily in their children's education. By the second decade of the twentieth century young Jews were achieving higher levels of schooling completion than their non-Jewish counterparts (Chiswick 1993a).¹⁶

The Transition Period – Mid Century, 1940 to 1960

By the 1940 Census the United States was emerging from the decade long Depression and had experienced little immigration for over 15 years. The Jewish community was in transition from a predominantly foreign-born to a predominantly native-born population. Among adults identified as Jews in the 1940 Census on the basis of their mother tongue, or that of their parents, over one-third (36.7 percent) were born in the U.S.

Compared with Jewish immigrants earlier in the century (1910), Table 6.2 reports that male foreign-born Jews in 1940 had a lower concentration in craft (20 percent) and sales (13 percent) occupations and a higher concentration in managerial (28 percent) and even in professional occupations (6 percent). The U.S.-born Jews in 1940 were younger and more highly educated than their foreign-born co-religionists. The American-born Jews in 1940 were less likely to be employed in blue-collar jobs in operative and craft occupations (only 14 percent and 10 percent, respectively), and more likely to be in the white-collar sales (20 percent), clerical (15 percent) and

¹⁶Data on the schooling attainment of adults are not available in the censuses and surveys prior to the 1940 Census. Data are available, however, on the schooling attainment of the parents of the respondents in the General Social Survey.

professional (15 percent) occupations. Their rate of self-employment (27 percent) was substantially below that of foreign-born Jews (41 percent).

The comparison of Jews with white non-Jews by nativity in 1940 shows a higher occupational attainment of the former (Table 6.2). Among the foreign born, Jews were more likely to be in professional, managerial and sales occupations, and slightly less likely to be craft workers, but substantially less likely to be in lower-skilled blue-collar jobs.

Most dramatic, however, are the differences by religion among the native born men. Nearly 15 percent of the U.S.-born Jews were professionals, in contrast to only 6 percent among the white native born. Jews were also twice as likely to be in managerial occupations (22 percent in contrast to 11 percent) and were more heavily represented in clerical and especially sales jobs. Jews were now decidedly less likely to be craft workers (10 percent in contrast to 17 percent) and were much less likely to be in lesser-skilled blue-collar jobs. Overall, 72 percent of the native-born Jewish men were in white-collar occupations in contrast to 31 percent of the non-Jewish white men.

The proportion self-employed in 1940 differs by little between Jews and others among the native born (27 percent). However, there is a sharp difference among sectors. Jewish self-employment is more intensive in professional occupations and retail and wholesale trade, while among non-Jews a substantial proportion of the self-employed is farmers.

The 1940 Census permits for the first time in census data an analysis of the wage, salary, and commission income of those with earnings (i.e., excluding the self-employed) among Jews (defined by mother tongue) and non-Jews. The average annual earnings among men were \$ 1574 for Jews and \$1321 among non-Jews. This 19.2 percent earnings advantage may be due, in part, to more favorable characteristics including living in urban areas in the north, and a greater proportion long-duration immigrants, although a lower level of schooling (8.6 years compare to 9.0 years) would have the opposite effect. The differences in proportion married, labor market experience and weeks worked in 1939 were small. Other variables the same, however, Jewish wage and salary workers earned 8.8 percent more than their non-Jewish counterparts, and the difference is highly significant (t-ratio = 4.7). Thus, over half of the observed greater earnings of Jews in the 1940 Census is attributable to measurable characteristics, yet nearly half of the differential persists when other measure variables are the same.¹⁷

¹⁷ When the analysis is performed separately by nativity, other variables being the same, the earnings differential between Jews and non-Jews is larger among the foreign born (coefficient = 0.111, t-ratio = 5.0) than among the native born (coefficient = 0.055, t-ratio = 2.0), although the difference in the coefficients by nativity is not statistically significant (t-ratio = 1.59). Among the foreign born, other variables the same, the earnings of Jews were higher than those from the British Isles (2.9 percent) and Canada (4.2 percent), but these differences were not significant. For all other immigrant origins the differences were large and significant. Even in an analysis limited to those living in the New York Metropolitan Area, Jewish earnings exceeded those of non-Jews (coefficient = 0.076, t-ratio = 3.2) due in part to the higher earnings of Jewish immigrants (coefficient = 0.111, t-ratio = 3.5), other things being the same.

The data in Table 6.2 for 1950 and 1960 continue the native-born, foreign-born distinction as in the pre-war data. With the end of mass immigration as a result of the 1924 immigration restrictions, the data on the foreign born for 1950 and 1960 reflect a shrinking aging foreign-born population among both Jews and non-Jews. The data on the native born for Jews are for second-generation Americans, those who had one or both parents born in Russia or Russia/Poland.

Among the male native-born Jews the proportion in professional occupations increased from 1950 to 1960 by 4.2 percentage points, from 15.7 percent to 19.9 percent, while among non-Jews the increase was smaller (2.8 percentage points) and the level lower, 7.9 percent in 1950 and 10.6 percent in 1960. Other white collar employment, in managerial, clerical and sales jobs, showed a small decline among Jews born in the U.S. (from 49 percent in 1950 to 45 percent in 1960), with an unchanged lower level among native born non-Jews (24 percent in both 1950 and 1960).

The Jewish fathers in the General Social Survey (GSS), primarily immigrants and the children of immigrants, were adult members of the labor force in the early post-World War II period. They had 11.6 years of schooling in contrast to the 9.8 years for the white non-Jewish fathers, even after the respondent's age is held constant. The differential of 1.80 years is reduced to 1.04 years when the father's place of residence is held constant. There is, however, a very sharp age effect in the education differential. There appears to have been no difference in parental schooling among fathers born at the turn-of-the-century, but that with the passage of time a Jewish advantage in schooling attainment emerged among younger birth cohorts (Chiswick 1993a).

The Jewish fathers in the General Social Survey continued a trend started by their immigrant fathers and grandfathers. From their immigrant ancestors to the early post-war period the occupational distribution of Jews had shifted markedly (Table 6.2). Adult male Jews went from 2 percent professionals and 8 percent managers (in contrast to 4 percent and 6 percent, respectively, for the white native-born non-Jews) in 1900, to 14 percent professionals and 45 percent managers (9 percent and 15 percent, respectively, for white non-Jews). Yet their occupational attainment was higher than what could be attributed to their higher level of schooling. The Jewish GSS fathers had a higher occupational prestige score (47 points compared with 40 points), and a differential remained (by 3 points) even after holding constant the fathers' age, schooling and geographic location (Chiswick 1993a).

The GSS respondents were not asked their father's income, but they were asked their perception as to whether, when they were age 16, their family's income was below average, average, or above average. Among the Jews, 31 percent reported that they believed their family income was above average or far above average, in contrast to 17 percent among non-Jewish GSS respondents (Chiswick 1993a). The Jewish respondents perceived higher family income than the non-Jewish respondents in spite of the low labor force participation of Jewish mothers and the respondents being more likely to associate with and compare themselves with other Jews.

Late Twentieth Century – 1970 to 1990

The investments by the GSS fathers in their own economic success did not result in a sacrifice in their children's opportunities. The Jewish respondents in the GSS, whether male or female, have higher levels of schooling than non-Jews of the same gender (2.5 years for men and 2.2 years for women). Might this be merely reflecting the high level of education of their Jewish fathers? While the differential narrows when the father's education (among other variables) is held constant, it is still substantial, 2.1 years for men and 1.3 years for women (Chiswick 1993a). The Jewish advantage in educational attainment continued to grow among the GSS respondents compared to their fathers. There is some evidence of continued growth in the schooling differential among the younger members of the GSS sample. Indeed, by 1990, 71 percent of adult Jewish men were college graduates compared to only 25 percent for adult white men.¹⁸

Occupational prestige scores can be studied among the GSS respondents (Chiswick 1993a). The score for Jewish men is substantially greater than the score for non-Jewish men (53 compared to 42 points). The 11 point difference is reduced to 3.8 points when education, age and other variables describing the respondent are held constant. Also holding constant the father's occupational score reduces the difference to 3.5 points. Thus, even taking account of the high occupational status of their fathers, there has been a larger increase in occupational status from father to son among contemporary American Jews than among their non-Jewish counterparts.

The occupational status of Jews continued to advance relative to others in the post-war period (Table 6.2). Recall that professionals were 14 percent of the adult Jewish labor force among the GSS fathers. The proportion is 20 percent in the 1957 Current Population Survey (CPS), 27 percent in the 1970 Census, 43 percent among GSS respondents (around 1980), and 47 percent in the 1990 National Jewish Population Survey. Among non-Jewish white men the proportion employed as professionals increased from 9 percent to only 19 percent over the same period. Managerial employment among Jewish men had declined from 45 percent in the early post-war period to only 17 percent in 1990, little more than the proportion for non-Jews (13 percent).

Most dramatic is the decline in "blue collar" employment among Jews. The Jewish blue-collar worker has nearly disappeared (Table 6.2). The proportion working in craft, operative, transport, non-farm laborer and agricultural occupations declined from 59 percent in the 1900 Census, to 38 percent in the 1940 Census, to 24 percent among the GSS fathers, to less than 10 percent currently (GSS respondents and 1990 NJPS). In contrast the change for white non-Jewish men has been less dramatic, from 74 percent in 1900 (36 percent in non-farm blue collar jobs) to

¹⁸ For an analysis of differences in schooling and occupational attainment between Jewish men and women, see Hartman and Hartman (1996).

64 percent in 1940 (47 percent excluding agriculture), to 45 percent in 1990 (41 percent excluding agriculture).

The proportion of Jews who are self-employed fell from over half among GSS fathers to about one-third in the 1950s to 1970s, to just over one-quarter in 1990 (Table 6.2). Yet, Jews still have a rate of self-employment (27 percent in 1990) about double that of white non-Jews (14 percent). The nature of Jewish self-employment, however, has changed and differs from that for non-Jews. The new stereotypical self-employed Jewish worker is a highly educated professional.

The high level of human capital investment of American Jews has, of course, been translated into high earnings. The higher earnings of Jewish production workers in 1909 and wage and salary workers in 1940, and the GSS respondents' perceptions of high family income when they were youths, have already been mentioned.

In the March 1957 CPS Jewish men had a median income substantially greater than white Protestant and Roman Catholic men (\$4900 compared to \$3728 and \$3954, respectively, or 31 percent and 24 percent higher median income). Among employed men living in urban areas (where nearly all Jews live), after standardizing for major occupational group, Jewish median income still exceeded that of white Protestants and Roman Catholics (\$4773 compared to \$4553 and \$4509, respectively, or 4.8 percent and 5.9 percent higher median income) (U.S. Bureau of the Census [n.d.](#), Table 18). This procedure underestimates, however, the Jewish/non-Jewish differences in mean earnings for workers of the same skill level because of the positive skewness in income and the use of medians rather than means, and because occupational attainment reflects both skill level and the labor market success for a given skill level.

More recent data confirm the higher earnings among Jewish men than other white men, even of the same age, schooling and location. Among the GSS respondents and in the 1970 Census data, the two most recent post-war data sources that permit this multivariate analysis, Jewish men earned around 16 percent more than non-Jews with similar measured characteristics (Chiswick [1983, 1993a](#)).¹⁹ Nor is there any indication that this differential has been diminishing in more recent GSS survey years (up to 1987).²⁰

¹⁹This does not control for occupation, which is an alternative to earnings as a measure of labor market attainment. When occupational attainment and self-employment status are also held constant, the earnings advantage of Jews in the 1970 Census analysis declines from 16 percent to 10 percent. If the analysis is limited to those living in urban areas inside Standard Metropolitan Statistical Areas (SMSAs) in New York State, New Jersey and Connecticut, without the statistical control for occupation and self-employment, Jews earn 8 percent more than non-Jews. Thus, even with a statistical control for occupation, self-employment status and living in the New York metropolitan area, all of which are endogenous, it appears that Jews still have higher earnings than white non-Jews.

²⁰For a comparative analysis of Jewish household income from 1969 to 1989, see Walters and Wilder ([1997](#)).

Summary and Conclusions

From the time of the German Jewish immigration more than a century ago to the present there has been an explosion of achievement among American Jews.²¹ The German-Jewish immigrant merchants and peddlers (clerical and sales occupations) of the second half of the nineteenth century were swamped numerically by the arrival (1881–1924) of Eastern European Jewish immigrants who, initially, were concentrated primarily in craft and operative jobs. The new immigrants and their descendants experienced rapid educational and occupational mobility and by the mid-twentieth century were concentrated in managerial and sales jobs, with increasing numbers as professionals. By the late twentieth century American Jewish men were predominantly college graduates, and professionals and managers.

Starting with an initially low and narrow range of occupations, the average level and dispersion in occupational status increased during the first half of the twentieth century. During the second half of the century, the level continued to increase while the dispersion narrowed with the death and retirement of the lowest skilled immigrants and first generation American Jews, and the labor market entry of later generations of highly educated native-born Jews. Throughout the period under study Jewish men have had a higher rate of non-farm self-employment than their non-Jewish counterparts. The nature of this self-employment has changed over time from predominantly self-employed shopkeepers and small manufacturers to many self-employed professionals.

The available data on labor market earnings over this period (1909–1980) indicate that Jewish men also earn more than non-Jewish men not only overall, but also when other measured variables are the same. Depending on what other variables are held constant beyond schooling, age and marital status, the earnings differential in the post-war period has been a statistically significant 8–15 percent.

Thus, the achievement of American Jewish men has not been limited to the Jewish Nobel Laureates or the “captains of industry.” It has rather been a very broad-based achievement encompassing the community as a whole. It has, moreover, been an advancement in which at each stage Jews have taken advantage of opportunities for upward mobility, whether through immigration itself, in self employment, in school or in the labor market. Each generation has invested in itself while at the same time investing in the next generation. That is, the large improvements in economic status among Jews relative to other white men were both intra-generational, as Jewish immigrants experienced more rapid increases than did other immigrants, and intergenerational, as the increased economic status from fathers to sons was greater among the Jews. As a result the relative achievement differential has widened over the course of the twentieth century in favor of Jews.

²¹ This achievement among Diaspora Jews in the twentieth century does not seem to be limited to the United States. Rather, it seems to be a widespread success story. See, for example, Darvish (1985), Elazar with Medding (1983), Kahan (1986), Kuznets (1966), Prais and Schmool (1975), and Syrquin (1985).

American Jews have been successful in identifying and taking advantage of opportunities for advancement. The precise nature or manner of transmission of these decision-making skills is not yet clear. They presumably flow somewhere from the Jewish family, religion, culture, history and institutions, broadly defined, and have been facilitated by the relatively open nature of the American economy.

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Chapter 7

The Occupational Attainment of American Jewry: 1990 to 2000



Barry R. Chiswick

This chapter is concerned with documenting the changes from 1990 to 2000 in the occupational attainment of adult Jewish men and women compared to their non-Jewish counterparts, based on the U.S. Census and the National Jewish Population Survey. The analysis for men constitutes an extension of an earlier study that compared the occupational distributions of Jewish and other men from 1890 to 1990 (Chiswick 1999 or this volume Chapter 6). This study for the first time includes a comparative occupational analysis for Jewish and other women. Moreover, it documents the effect on these occupational distributions of the changes in the occupational classifications used by the U.S. Census Bureau in the 1990 and 2000 Censuses of Population and the National Jewish Population Surveys of 1990 and 2000–01.

The Background

The object of the earlier study (Chiswick 1999), as well as this one, was to quantify the broad occupational categories and extent of self-employment that reflect both the relative skills the individual brings to the labor market, and the likely economic benefits from these skills. The previous analysis was limited to adult males (age 25–64) because until recent decades married women, whether Jewish or not, had

Revision of the original article published in *Contemporary Jewry*, 27(1), 2007, pp. 80–111. I appreciate the comments of Carmel U. Chiswick, as well as those of the two referees, the research assistance of Jidong Huang, and assistance with the NJPS from Lawrence Kotler-Berkowitz.

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relatively low rates of labor forces participation.¹ The analysis was limited to whites to increase comparability because nearly all Jews in the United States are white (97 percent in the 2000 National Jewish Population Survey).²

Most of the 12 data points for the period covered, 1890–1990, were from U.S. government sources, primarily the decennial censuses, although other data points were from private sources, including the National Opinion Research Center's General Social Survey (GSS) and the 1990 National Jewish Population Survey (NJPS 1990). In some instances there were direct Jewish identifiers (e.g., the question, "What is your religion?"). In other instances, indirect techniques were employed, such as in the early decades of the twentieth century, when a Yiddish or Hebrew mother tongue, or Russian or Russian-Poland birth or parentage, served as identifiers.

The decennial census of the United States asked the respondents' occupation for the first time in 1850. The U.S. Census has never included a question on religion. There would be no practical way of identifying Jews in the 1850 Census. Most of the Jews in the United States in 1850 were U.S.-born Jews of Sephardic origin or recent immigrants from Germany. Neither group of Jews could be identified as such in the data that are available. Country of birth was first asked in the 1850 Census, and parents' country of birth was first asked in 1870 (the question on parents' country of birth was discontinued after the 1970 Census). The first time language was asked about was in 1910 with a question on "mother tongue," specified at the time as the customary language spoken in the respondent's home before the respondent or the respondent's parents immigrated. A language question of one sort or another has been included in every census since then, most recently regarding a language other than or in addition to English currently spoken in the home.

The large-scale Russian and Russian-Polish Jewish immigration did not begin until the 1880s. In principle, the 1890 Census would be the first census that could be used to develop the occupational distribution of American Jews using Russian origin as an identifier for Jewish immigrants. Unfortunately, the published volumes from this census do not include an occupational distribution by country of birth, and most of the manuscript records from this census were destroyed in a fire (Blake 1996). As a result, a systematic microdata file has not been developed from the 1890 Census. Public-Use Microdata Samples (PUMS) have been constructed for all of the censuses from 1900 through 2000.³

Thus, the comparative occupational time series published earlier, which was limited to men, began with a unique survey published as *Vital Statistics of the Jews of the United States*, better known as the Billings Report (Billings 1890,

¹For studies of Jewish women's labor supply behavior over the course of the twentieth century, see Chiswick (1988) and Glenn (1990), and the references therein.

²This is consistent with the racial distribution of Jews in the General Social Survey, 96 percent white non-Hispanic, 1 percent Hispanic, 2 percent black and 1 percent Asian (Smith 2005, p. 287).

³Since the Census Bureau did not create a PUMS file for 1930, the 72-year bar to private access to these data had to expire before a non-governmental agency could create these micro data. A preliminary microdata file became available in 2005.

Chiswick 2001). This appears to be the only time that the U.S. government conducted a survey exclusively of American Jews. As the objective was to survey in 1890 only Jews living in the United States as of 1885, the respondents were predominantly German Jews, both native and foreign born.

The time series ended with the latest data available on a national sample of American Jews, from the National Jewish Population Survey of 1990. The occupational distribution of male American Jews aged 25–64 was compared with the distribution for adult white men as reported in the 1990 Census. While Jews cannot be extracted from the 1990 Census data on adult white men, they constitute only 2 percent of the total and therefore their inclusion has little overall effect on the white male occupational distribution.

With the completion of the National Jewish Population Survey of 2000–01 and the release of the 2000 Census PUMS from the Census Bureau, the year 2000 now can be added to the time series for adult men. Moreover, the increase over time in the labor force participation rate among adult women, and the sample sizes in the two NJPS surveys, permit the computation of the occupational distributions of adult Jewish and white women in 1990 and 2000 in a manner comparable to that of men.⁴ Finally, the change in the Census Bureau's, and hence the NJPS's, occupational classifications from the 1990 to the 2000 data need to be considered to avoid confounding the effects of changes in occupational classifications with changes over time in occupational distributions.

Occupational Data for 1990 and 2000

Three types of comparisons can be made on the occupational distribution of Jews in 2000: comparisons at a moment in time with non-Jewish whites; across time with Jews in earlier time periods; and by gender that is, between Jewish men and Jewish women. As much as possible, efforts were taken to maximize comparability with the occupational distributions constructed earlier between Jewish and non-Jewish men. To link the analysis, the data are reported here for 1990 as well as 2000.

Table 7.1 is comparable to Table 7.1 in Chiswick (1999 or this volume Chapter 6) and reports the definitions used to identify Jews in the NJPS 1990 and NJPS 2000; that is, Jewish religion at birth. The Public Use Microdata Samples from the 1990 and 2000 U.S. Censuses of Population are used to identify adult whites. While Jews cannot be separately identified in the census, their inclusion has only a minor impact

⁴The NJPS in 1990 and 2000 was designed to be a representative sample of the Jewish population. As with all censuses and surveys, some individuals selected to be included in the sample did not respond at all or did not respond to particular questions. The extent to which nonresponsive rates affect the results or interpretations reported here is unclear. Another study of the NJPS analyzed earnings and the extent to which biases result from item non-response to the question on earnings (see, this volume, Chap. 15). Item non-response to the earnings question was largely random and did not affect the results of the analysis.

Table 7.1 Summary characteristics of data for analysis of adult white men and women, Jews and non-Jews, 1990–2000^a

Period	Data set	Identification of Jews	Comments	Population ^b
1990	National Jewish Population Survey 1990. 1990 Census of population, PUMS, 1/100 Sample	Religion at birth in NJPS	Males and Females, age 25–64 Respondents only in NJPS	5.5 million Jews, 2.2 percent of population (“core” Jews)
2000	National Jewish Population Survey 2000–01. 2000 Census of population, PUMS, 1/100 Sample	Religion at birth in NJPS	Males and Females, age 25–64 Respondents only in NJPS	5.2million Jews, 1.9 percent of population (“core” Jews)

^aJews included among non-Jews

^bThe population estimate for Jews is based on a slightly different definition of who is Jewish than the definition used to construct the occupational distributions. Comparable definitions of who is a Jew can be found in the NJPS 1990 and NJPS 2000–01. Data on number of Jews from NJPS 2000–01, *Strength, Challenge and Diversity in the American Jewish Population*, New York: United Jewish Communities, September 2003, Table 1

on the white occupational distribution, and if anything, tends to bias downward Jewish/non-Jewish differences. As before, the analysis is limited to whites since nearly all Jews report their race as white.

To maximize comparability of the NJPS occupational data with that of the U.S. Census, in both 1990 and 2000 the NJPS used the same occupational classifications as the decennial U.S. Census. However, there were revisions in the occupational classifications between the two U.S. Censuses. To try to minimize the effects this might have on interpreting the trends in Jewish relative to non-Jewish occupational attainment from 1990 to 2000, the following procedure was adopted:

- A. The occupational distributions for Jews and non-Jews were computed for the NJPS 1990 and 1990 Census using the original 1990 occupational classifications.
- B. The occupational distributions for the NJPS 1990 and 1990 Census were recomputed using the new 2000 occupational classifications. This was done using the conversion algorithm made available by the Census Bureau.⁵
- C. The occupational distributions for NJPS 2000 and the 2000 Census were computed using the new 2000 occupational classifications.

The difference in the occupational distributions from A to B represent the effects of the change in classifications, while the difference between B and C represents the

⁵The algorithm converts 1990 Census occupation categories into the new 2000 Census codes. The reverse, converting 2000 occupations into their 1990 equivalents, cannot be done. See Scopp (2003) and U.S. Census Bureau (2003).

occupational changes over the decade holding the occupational classifications constant.

The data on occupational status are available only for those who worked shortly before or during the survey period. Among white males aged 25–64 in 2000, labor force participation rates are very high: 89 percent for Jews and 85 percent for non-Jews. The participation rates are much lower for white women (74 percent and 71 percent, respectively, for Jews and others). The labor force participation rates of those aged 25–64 in 1990 were 91 percent and 89 percent, respectively, for Jewish and non-Jewish men, and 72 percent and 69 percent for Jewish and non-Jewish women. Thus, there was little difference in labor force participation rates by religion for those of the same gender, and gender differences within religious groups continued to narrow, by 4 percentage points for Jews and by 6 percentage points for others.

More so for women than for men, an analysis of earnings and employment would need to account for the fact that the participation decision is not random, but rather is selective with regard to such characteristics as age, health status, child-care responsibilities, income of other family members, etc.⁶

Occupational Distribution for Men

First consider the occupational distribution for males in 1990 under the old and new categories in Panels A and B in Table 7.2, which is an extension of Table 7.2 in Chiswick (1999). The reclassification of occupations had very little effect on the distribution for the general population of white men. Clerical workers were largely mapped into office workers. Agriculture decreased from 3.5 percent in the 1990 codes to 1.3 percent in farming in 2000 codes, in part because farm owners and managers were reclassified as managerial. Craft workers, operatives, and laborers (40 percent) in 1990 were reclassified in the 2000 coding as construction, transportation, and production workers (39 percent).

More dramatic changes occur among Jewish men with the new classifications. Managerial employment in 1990 declines from 18 percent to 16 percent, and professional occupations decrease from 43 percent to 42 percent. The blue-collar occupations remain about the same at 9 percent. There were no Jews reported in agricultural occupations in the 1990 NJPS.

Using the 2000 occupational classifications (Panels B and C in Table 7.2), there are changes from 1990 to 2000. Managerial employment went up among non-Jews (from 13 percent to 15 percent), and largely stayed the same among Jews (at about 15 percent).⁷ This represents a historic change, as a larger

⁶An econometric analysis of the labor supply decisions of Jewish and non-Jewish women is beyond the scope of this chapter, but can be found in this volume, Chap. 10.

⁷The standard errors of proportions are discussed in a note to Tables 7.1 and 7.2.

Table 7.2 Occupational distribution and self-employment status for adult Jewish and white men, 1990–2000 (Percent)

Panel A – 1990 Occupations (1990 Classification)	NJPS 1990	U.S. Census 1990
Managerial	18.29	13.25
Professional & Technical and kindred workers	43.33	19.20
Med. (MD, DDS)	3.40	1.00
Law	2.89	1.08
College & University Teacher	3.75	0.76
Other professional occupations	33.29	16.36
Sales	17.94	11.16
Clerical	7.04	5.93
Service	4.52	7.39
Agriculture	0.00	3.45
Craft	6.20	20.89
Operatives	1.73	16.14
Laborer	0.96	2.61
Total	100.0	100.0
Self-Employed (Percent)	26.84	14.06
Sample size	683	488,970
Panel B – 1990 Occupations (2000 Classification)	NJPS 1990	Census 1990
Managerial	16.53	13.14
Professional	42.4	18.98
Med. (MD, DDS)	3.40	1.00
Law	2.89	1.08
College & University Teacher	3.75	0.76
Other professional occupations	32.39	16.14
Sales	18.32	11.45
Office	7.89	7.13
Service	5.43	8.85
Farming	0.00	1.26
Construction	4.79	16.55
Transportation	1.75	13.35
Production	2.83	9.28
Total	100.0	100.0
Self-Employed (Percent)	26.84	14.06
Sample size	683	488,970
Panel C – 2000 Occupations (2000 Classification)	NJPS 2000	Census 2000
Managerial	14.78	15.09
Professional	52.99	19.74
Med. (MD, DDS)	4.76	0.93
Law	5.31	1.10
College & University Teacher	1.88	0.93
Other professional occupations	41.04	16.78
Sales	18.50	10.39

(continued)

Table 7.2 (continued)

Office	3.08	6.04
Service	3.85	9.13
Farming	0.22	0.89
Construction	2.76	18.72
Transportation	2.15	8.99
Production	1.67	11.01
Total	100.0	100.0
Self-employed (Percent)	23.23	14.02
Sample size	1062	529,956

proportion of Jews than non-Jewish white men were in managerial jobs in all previous points in the time series from 1890 to 1990. The gap between male Jews and non-Jews in the professions continued to grow. The proportion of Jewish men in the professions increased from 42 percent to 53 percent, while the increase among white men in general only rose from 19 percent to 20 percent. The proportion of Jewish men in office work declined from 8 percent to 3 percent, with a smaller decline (from 7 percent to 6 percent) among other men. The proportion of Jews working in the four blue-collar occupations (farming, construction, transportation, and production) went from 9 percent to 7 percent, while among other men it remained steady at about 40 percent.

The data on professionals in 1990 and 2000 are broken down into four categories: Medicine (medical doctors and dentists), Law (lawyers and judges), College and University Teachers, and Other Professional Occupations. The proportion of men in Other Professional Occupations in 1990 essentially was not affected by the change in occupational classifications (Table 7.2, Panels A and B). The changes from 1990 to 2000 using the 2000 occupational categories were more dramatic (Table 7.2, Panels B and C). The proportion of non-Jewish white men in each of the four professional categories showed little change. Among Jews, however, the proportions increased slightly in Medicine (from 3 percent to 5 percent) and Law (also from 3 percent to 5 percent), with the most dramatic increase for Other Professional Occupations (from 32 percent to 41 percent), whereas the proportion as College and University Teachers declined (from 3.3 percent to 1.7 percent).

This decline by about half (1.6 percentage points) in the proportion of Jewish men in College and University Teaching may reflect, in part, either a real trend, a subtle change in the coding procedures, or random sampling. A real decline in College and University Teaching among younger Jews is consistent with the age distribution of the respondents in the 1990 NJPS. Of the 28 unweighted male respondents in the 1990 NJPS who were coded as being College and University Teachers, seven were age 55 or older and would be outside the age range in 2000. Yet in 2000 only one of the 17 unweighted male respondents in the College and University Teachers category were in the 25-to-34 age bracket.

Further evidence that the decline in College and University Teaching among Jewish men in the NJPS reflects a real trend is to be found in data on the receipt of Ph.D.s in the United States.⁸ In the post-World War II period, the Ph.D. became the required terminal degree for teaching in most four-year colleges and universities. While not all College and University Teachers have a Ph.D., and many with Ph.D.s do not enter this occupation, the awarding of Ph.D.s can serve as a proxy for new entrants into College and University Teaching. The listing of Ph.D. dissertations deposited at University Microfilms, University of Michigan Ann Arbor includes the full names of the new Ph.D.s. The Distinctive Jewish Name (DJN) technique for 36 DJNs was applied to the middle and to the last (family) name.

Data were compiled for those with a DJN, and in total from 1950 to 2004 for the four major divisions (Humanities, Education, Social Science and Physical Science) (Chiswick 2006). There was a continuous increase in the number of Ph.D.s awarded in the United States from 9000–10,000 annually in the late 1950s to 50,000 annually in the late 1990s. Among the DJNs, however, the number of Ph.D.s increased from just under 200 per year in the late 1950s to more than 550 per year in the 1970s, and then it declined to less than 450 per year in the 1990s. It declined further to an average of below 400 annually in the five years since 2000. With the increase in women receiving Ph.D.s, the decline in Ph.D.s among Jewish men would have started sooner and would have been steeper than the decline in the total among Jews. These data are consistent with an increase in the College and University Teaching employment among Jewish men through 1990, and a decline thereafter as earlier cohorts of Jewish Ph.D.s reached age 65, died, or retired.

In summary, while there continued to be an increase in the occupational attainment for all white men from 1990 to 2000 (from 33 percent professional and managerial to 35 percent), the level was higher and the increase greater among Jewish men (from 59 percent to 68 percent).

Self-employment patterns, however, continue to show some convergence.⁹ Self-employment among all men remained stable at 14 percent, but among Jews it declined sharply from 27 percent to 23 percent, continuing a long-term trend. This also continues the trend of Jewish managers and professionals increasingly being salaried rather than self-employed.

Occupational Distribution for Women

Table 7.3 reports the occupational distributions in 1990 and 2000 for Jewish and non-Jewish women.¹⁰ Jewish women experienced a dramatic increase in their occupational attainment from 1990 to 2000, much more so than non-Jewish women.

⁸For a discussion see this volume, Chap. 8.

⁹The self-employed include those who are self-employed in incorporated and unincorporated businesses, as well as the very small number reported as unpaid family workers. The self-employed in principle can be in any occupation, but most are in professional and managerial occupations, or are farm owners.

¹⁰These data are, of course, reported only for women who worked and reported an occupation.

Reasons for Loss of Observations

	1990 NJPS		2000 NJPS	
	Males	Females	Males	Females
Number of respondents	1185	1256	2281	2867
Loss of observations:				
No occupation	49	60	631	1024
Not born Jewish	231	310	309	334
Under age 25	65	61	141	156
Over age 64	157	179	134	123
Age not reported	0	5	4	12
Sample size	683	641	1062	1218

Notes on Standard Errors:

The standard error of the estimate for a proportion is $s.e. = \sqrt{pq/N}$. The largest standard error is when $p = 0.5$. For a sample of approximately 650 this is approximately 0.020, and for a sample of approximately 1100 it is approximately 0.0156. The census samples are so large that the standard errors are approximately zero for all practical purposes ($s.e. = 0.0007$).

The standard error for the difference in proportions from two independent samples is $s.e. = \sqrt{(p_1q_1/N_1) + (p_2q_2/N_2)}$, which at a maximum for two samples is $s.e. = \sqrt{(.5)^2/N_1 + (.5)^2/N_2} = .5\sqrt{1/N_1 + 1/N_2}$. Comparing the two NJPS samples it is approximately 0.0247.

Panels A and B in Table 7.3 compare the occupational distributions for Jewish and other women in 1990 using the original 1990 occupational categories and the redefined occupational codes. The data show that the change in definitions resulted in a small decline in the proportion of Jewish women in managerial occupations (from 15.2 percent to 14.0 percent) and no change in professional occupations (42 percent), with essentially no change among the other categories.

Panels B and C in Table 7.3 report the occupational distributions in 1990 and 2000 using the 2000 occupational categories. Managerial employment increased among Jewish women from 14 percent in 1990 to 16 percent in 2000, but remained steady at 11 percent among non-Jewish women. The proportion of Jewish women employed in professional occupations increased from 42 percent in 1990 to 51 percent in 2000.¹¹ The level and rate of increase was much greater among Jewish women than among non-Jewish women, as the latter increased only from 24 percent professional to 28 percent professional. Jewish women experienced a dramatic shift over the decade out of clerical/office work (from 25 per cent in 1990 to 12 percent in 2000). Their employment increased in sales from 10 percent to 13 percent, but showed little change in service jobs (about 5 percent) and the four blue-collar occupations (about 3 per cent). Non-Jewish women in 2000 were less likely to be in sales jobs (11 percent), but were far more likely to be in service jobs (15 percent) and

¹¹ This large increase in the proportion of Jewish women in professional occupations reflects the large proportion in professional employment among younger Jewish women in 1990. Among Jewish women age 25–44, 48 percent were in professional occupations compared to 31 percent for women age 45–64.

Table 7.3 Occupational distribution and self-employment status for adult Jewish and white women, 1990–2000 (Percent)

Panel A – 1990 Occupations (1990 Classification)	NJPS 1990	U.S. Census 1990
Managerial	15.16	10.53
Professional & Technical and kindred workers	42.42	23.60
Med. (MD, DDS)	0.43	0.25
Law	2.32	0.41
College & University Teacher	2.26	0.64
Other professional occupations	37.41	22.30
Sales	9.35	11.76
Clerical	24.84	27.43
Service	5.07	14.74
Agriculture	0.00	0.99
Craft	2.36	2.41
Operatives	0.29	7.98
Laborer	0.51	0.55
Total	100.0	100.0
Self-Employed (Percent)	14.02	8.55
Sample size	641	438,355
Panel B – 1990 Occupations (2000 Classification)	NJPS 1990	Census 1990
Managerial	14.00	10.23
Professional	41.83	23.69
Med. (MD, DDS)	0.43	0.25
Law	2.32	0.41
College & University Teacher	2.26	0.64
Other professional occupations	36.82	22.39
Sales	9.83	12.14
Office	24.70	27.16
Service	5.93	15.43
Farming	0.00	0.37
Construction	1.89	2.32
Transportation	0.81	2.10
Production	0.99	6.60
Total	100.0	100.0
Self-employed (Percent)	14.02	8.55
Sample size	641	438,355
Panel C – 2000 Occupations (2000 Classification)	NJPS 2000	Census 2000
Managerial	15.91	10.96
Professional	51.37	28.47
Med. (MD, DDS)	2.07	0.36
Law	3.33	0.52
College & University Teacher	0.83	0.92
Other professional occupations	45.14	26.67
Sales	12.89	11.10

(continued)

Table 7.3 (continued)

Office	12.12	25.06
Service	4.74	15.41
Farming	0.00	0.32
Construction	1.68	0.84
Transportation	0.59	2.03
Production	0.34	5.80
Total	100.0	100.0
Self-Employed (Percent)	11.27	8.62
Sample size	1218	488,113

Notes to Tables 7.2 and 7.3

Tables include Jews by religion at birth and white persons aged 25–64 who reported an occupation. Self-employed includes those in incorporated and unincorporated businesses and unpaid family workers. Self-employed may be recorded in any occupation. Farm owners and farm managers are included in Agriculture in the 1990 occupational classifications but in Managerial in the 2000 classifications. For the 2000 codes, farmers are hired farm workers who are not farm managers. Military officers are included in Professional occupations while enlisted personnel and rank not specified are in Operative (1990 classification) and Production (2000 classification) jobs. Sum may not total 100.0 due to rounding

blue-collar jobs (9 percent), with little change over the decade for the non-Jewish women.

Within the professional occupations, Jewish women were more likely than non-Jewish women to be in three of the four subcategories, with little difference in the College and University Teaching subcategory. However, Jewish women are less likely than Jewish men to be in Medicine, Law, and College and University Teaching, but are more likely to be in other professions (including other teaching and social work): 45 percent for Jewish women and 41 percent for Jewish men.

Self-employment (including unpaid family work) among Jewish women declined from 14 percent in 1990 to 11 percent in 2000, but remained higher than the stable level of 9 percent among non-Jewish women. Yet the self-employment of Jewish women (11 percent) remained at about half the rate of Jewish men (23 percent) in 2000.

For more detail on the frequency distribution of occupation by gener and religion see the Appendix.

Summary and Conclusions

This chapter has analyzed the occupational distributions of adult white men and women for Jewish-born Americans and non-Jewish Americans in 1990 and 2000, using the U.S. Censuses of Population and the National Jewish Population Surveys

conducted in those years. Jews are defined as those born Jewish by religion. Adjustments were made to the data to account for the changes in the occupational classifications between 1990 and 2000, and the changes resulting from the reclassifications were shown to be minor.

Jewish men had a greater proportion in managerial and professional occupations in 1990 (62 percent) compared to non-Jewish men (32 percent), and the gap increased by 2000 (68 percent for Jews and 35 percent among non-Jews). The share of male Jewish employment in sales remained constant (about 18 percent), but declined in office, service, and blue-collar work.

Managerial employment among Jewish men declined over the decade from 17 percent to 15 percent, and self-employment continued a long-term decline (from 27 percent to 23 percent over the decade). Jewish women also had a greater proportion in managerial and professional occupations in 1990 than non-Jewish women (56 percent compared to 34 percent) and a greater increase over the decade (67 percent for Jews compared to 39 percent for other women in 2000). Jewish women experienced a large decline in office work (from 25 percent in 1990 to 12 percent in 2000), with little change in proportion in the other occupational categories.

Self-employment among Jewish women also declined, from 14 percent to 11 percent, remaining at half the rate of Jewish men (23 percent) yet exceeding the rate among non-Jewish women (9 percent).

Among both Jews and non-Jews, there is little gender difference in the proportion of workers in the high-skill occupations and managerial and professional employment. Among employed Jews, 67 percent of the women and 68 percent of the men were in these occupations; among non-Jews this was the case for 39 percent of the women and 35 percent of the men. Thus, the differences in proportion in high-level occupations by religion are large, but the differences by gender within religions are small.

Moreover, the share of Jews in high-level occupations continued to increase at a more rapid rate over the 1990s, especially among professional occupations, increasing the gap. This change and the decline in the self-employment differential reflect an increased tendency among Jewish men and women in high-level occupations to be salaried workers rather than self-employed. The implications of the continued growth in high-level employment as salaried managers and professionals may be far-reaching and warrant further study.

Appendix

Table 7.4 NJPS 1990 occupation distribution

Data source: NJPS 1990

Code: Based on 1990 census occupation codes

Sample: Adult male Jews ages 25–64 who reported an occupation and whose religion at birth is Jewish^a

NJPS 1990	
Occupation category based on Census 1990 occupation codes	Percentage
Managerial (201–246, exclude 213, 215) ^b	18.29 ^c
Professional & Tech (001–197, 213, 215)	43.33
Med. (MD, DDS (062, 065))	3.40
Law (030, 031)	2.89
Col & U Teacher (I 02–140)	3.75
Other professional occupations	33.29
Sales (260–280)	17.94
Clerical (301–395)	7.04
Service (901–984)	4.52
Agriculture (801–824)	0.00
Craft (401–575)	6.20
Operatives (580–715)	1.73
Laborer (740–785)	0.96
Self-Employed ^d (percent)	26.84

Notes

^aReligion born is Jewish if the answer to question 19 in NJPS 1990 questionnaire is 1

^bRefer to the answer to question 48 in NJPS 1990 questionnaire for the specific meaning of each occupation code. Code 213 (construction inspectors, public administration), 215 (inspectors, except construction, public administration)

^cAll the numbers are weighted using population weight in NJPS 1990 data set (variable “popwgt”)

^dA person is self-employed if the answer to question 50 is 2 (self-employed) or 4 (in a family business for no pay)

Table 7.5 NJPS 1990 occupation distribution

Data source: NJPS 1990

Code: Based on 1990 census occupation codes

Sample: Adult female Jews ages 25–64 who reported an occupation and whose religion at birth is Jewish^a

NJPS 1990	
Occupation Category based on Census 1990 occupation codes	Percentage
Managerial (201–246, exclude 213, 215) ^b	15.16 ^c
Professional & Tech (001–197, 213,215)	42.42
Med. (MD, DDS (062, 065))	0.43
Law (030, 031)	2.32
Col & U Teacher (102–140)	2.26
Other professional occupations	37.41
Sales (260–280)	9.35
Clerical (301–395)	24.84
Service (901–984)	5.07
Agriculture (801–824)	0.00
Craft (401–575)	2.36
Operatives (580–715)	0.29
Laborer (740–785)	0.51
Self-Employed ^d (percent)	14.02

Notes

^aReligion born is Jewish if the answer to question 19 in NJPS 1990 questionnaire is 1^bRefer to the answer to question 48 in NJPS 1990 questionnaire for the specific meaning of each occupation code. Code 213 (construction inspectors, public administration), 215 (inspectors, except construction, public administration)^cAll the numbers are weighted using population weight in NJPS 1990 data set (variable “popwgt”)^dA person is self-employed if the answer to question 50 is 2 (self-employed) or 4 (in a family business for no pay)

Table 7.6 Census 1990 occupation distribution

Data source: Census 1990 PUMS 1 percent sample downloaded from ICPSR

Code: Based on 1990 census occupation codes

Sample: Adult white male ages 25–64 who reported an occupation

Census 1990	
Occupation Category based on Census 1990 occupation codes	Percentage
Managerial (000–042, exclude 023, 024, 026, 035, 036) ^a	13.25 ^b
Professional & Tech (043–242, plus 023, 024, 026, 035, 036, 903)	19.20
Med. (MD, DDS (084, 085))	1.00
Law (178, 179)	1.08
Col & U Teacher (113–154)	0.76
Other professional occupations	16.36
Sales (243–302)	11.16
Clerical (303–402)	5.93
Service (403–472)	7.39
Agriculture (473–502)	3.45
Craft (503–702)	20.89
Operatives (703–888, exclude 869, plus 904, 905)	16.14
Laborer (889–902, plus 869)	2.61
Self-employed ^c (percent)	14.06

Notes

^aPartial list for the occupation codes used in this table. For a complete list, please refer to Census 1990 occupation list. Codes 23 (accountants), 24 (underwriters), 26 (management analysts), 35 (construction inspectors), 36 (inspectors and compliance officers), 869 (construction laborers), 903 (military occupation: commissioned officers and warrant officers), 904 (military occupation: non-commissioned officers and other enlisted personnel), 905 (military occupation, rank not specified)

^bAll the numbers are weighted using personal weights (variable “pwgtl”)

^cSelf-employed include “Self-employed in unincorporated business or company;” “Self-employed in incorporated business or company;” “Unpaid family worker”

Table 7.7 Census 1990 occupation distribution

Data source: Census 1990 PUMS 1 percent sample downloaded from ICPSR. Code: Based on 1990 census occupation codes

Sample: Adult white female ages 25–64 who reported an occupation

Census 1990	
Occupation Category based on Census 1990 occupation codes	Percentage
Managerial (000–042, exclude 023, 024, 026, 035, 036) ^a	10.53 ^b
Professional & Tech (043–242, plus 023, 024, 026, 035, 036, 903)	23.60
Med. (MD, DDS (084, 085))	0.25
Law (178, 179)	0.41
Col & U Teacher (113–154)	0.64
Other professional occupations	22.30
Sales (243–302)	11.76
Clerical (303–402)	27.43
Service (403–472)	14.74
Agriculture (473–502)	0.99
Craft (503–702)	2.41
Operatives (703–888, exclude 869, plus 904, 905)	7.98
Laborer (889–902, plus 869)	0.55
Self-employed ^c (percent)	8.55

Notes

^aPartial list for the occupation codes used in this table. For a complete list, please refer to Census 1990 occupation list. Codes 23 (accountants), 24 (underwriters), 26 (management analysts), 35 (construction inspectors), 36 (inspectors and compliance officers), 869 (construction laborers), 903 (military occupation: commissioned officers and warrant officers), 904 (military occupation: non-commissioned officers and other enlisted personnel), 905 (military occupation, rank not specified)

^bAll the numbers are weighted using personal weights (variable “pwgtl”)

^cSelf-employed include “Self-employed in unincorporated business or company;” “Self-employed in incorporated business or company;” “Unpaid family worker”

Table 7.8 NJPS 1990 occupation distribution

Data source: NJPS 1990

Code: Based on 2000 census occupation codes^aSample: Adult male Jews ages 25–64 who reported an occupation and whose religion at birth is Jewish^b

NJPS 1990	
Occupation Category based on Census 2000 occupation codes	Percentage
Managerial (001–099)	16.53
Professional (100–359)	42.43
Med. (MD, DDS (301, 306))	3.40
Law (210, 211)	2.89
Col & U Teacher (220)	3.75
Other professional occupations	32.39
Sales (470–499)	18.32
Office (500–599)	7.89
Service (360–469)	5.43
Farming (600–619)	0.00
Construction (620–769)	4.79
Transportation (900–979)	1.75
Production (770–899)	2.83
Self-employed ^c (percent)	26.84

Notes

^aThe Census 2000 industry and occupation classifications were completely revised compared to 1990. They are now based on the 1997 NAICS (North American Industry Classification System) and the 2000 SOC (Standard Occupational Classification) coding structures. The 1990 system was based on the 1987 SIC (Standard Industrial Classification Manual) and the 1980 SOC (Standard Occupational Classification Manual). In order to compare the change of occupation distribution over time, we converted the Census 1990 occupation category into Census 2000 occupation category based on the published crosswalks from the U.S. Census website. The crosswalk we used is “The Relationship Between the 1990 Census and Census 2000 Industry and Occupation Classification Systems, Technical Paper #65” (http://www.census.gov/hhes/www/ioindex/tp65_report.html) and “Occupation Table Cross walks for Comparing 1990 to 2000 Census Data” (http://www.census.gov/hhes/www/ioindex/occcross_menu.html). One caveat about using the template provided by the census website is that the conversion factors in the template are based on the employed persons age 16 and over in Census 1990 data. Those conversion factors may not be appropriate when applied to Jews. For example, according to the template, among those employed persons age 16 and over whose reported occupation belongs to Farming, Forestry & Fishing occupations in Census 1990 coding structure, 35 percent is reclassified into management occupation category in Census 2000 coding structure; 29 percent is reclassified into service occupation category; 36 percent is reclassified into Farming, Forestry & Fishing occupation category; and the rest is reclassified into transportation occupation category. It is very likely that those conversion factors (percentages) will be different for Jews than the rest of the population

^bReligion born is Jewish if the answer to question 19 in NJPS 1990 questionnaire is 1

^cA person is self-employed if the answer to question 50 is 2 (self-employed) or 4 (in a family business for no pay)

Table 7.9 NJPS 1990 occupation distribution
Data source: NJPS 1990
Code: Based on 2000 census occupation codes
Sample: Adult female Jews ages 25–64 who reported an occupation and whose religion at birth is Jewish^a

NJPS 1990	
Occupation category based on Census 2000 occupation codes	Percentage
Managerial (001–099)	14.00
Professional (100–359)	41.83
Med. (MD, DDS (301, 306))	0.43
Law (210, 211)	2.32
Col & U Teacher (220)	2.26
Other professional occupations	36.82
Sales (470–499)	9.83
Office (500–599)	24.70
Service (360–469)	5.93
Farming (600–619)	0.00
Construction (620–769)	1.89
Transportation (900–979)	0.81
Production (770–899)	0.99
Self-employed (percent)	14.02

Notes

^aReligion born is Jewish if the answer to question 19 in NJPS 1990 questionnaire is 1

Table 7.10 Census 1990 occupation distribution

Data source: Census 1990 PUMS 1 percent sample downloaded from ICPSR

Code: Based on 2000 Census occupation codes^a

Sample: Adult white male ages 25–64 who reported an occupation

Census 1990	
Occupation Category based on Census 2000 occupation codes	Percentage
Managerial (001–099)	13.14
Professional (100–359)	18.98
Med. (MD, DDS (301, 306))	1.00
Law (210, 211)	1.08
Col & U Teacher (220)	0.76
Other professional occupations	16.14
Sales (470–499)	11.45
Office (500–599)	7.13
Service (360–469)	8.85
Farming (600–619)	1.26
Construction (620–769)	16.55
Transportation (900–979)	13.35
Production (770–899)	9.28
Self-employed ^b (percent)	14.06

Notes

^aThe Census 2000 industry and occupation classifications were completely revised compared to 1990. They are now based on the 1997 NAICS (North American Industry Classification System) and the 2000 SOC (Standard Occupational Classification) coding structures. The 1990 system was based on the 1987 SIC (Standard Industrial Classification Manual) and the 1980 SOC (Standard Occupational Classification Manual). In order to compare the change of occupation distribution over time, we converted the Census 1990 occupation category into Census 2000 occupation category based on the published crosswalks from the U.S. Census website. The crosswalk we used is “The Relationship Between the 1990 Census and Census 2000 Industry and Occupation Classification Systems, Technical Paper #65” (http://www.census.gov/hhes/www/ioindex/tp65_report.html) and “Occupation Table Crosswalks for Comparing 1990 to 2000 Census Data” (http://www.census.gov/hhes/www/ioindex/occcross_menu.html). One caveat about using the template provided by the census website is that the conversion factors in the template are based on the employed persons age 16 and over in Census 1990 data. Those conversion factors may not be appropriate when applied to Jews

^bSelf-employed may be recorded in any occupation. Self-employed include “Self-employed in unincorporated business or company;” “Self-employed in incorporated business or company;” “Unpaid family worker”

Table 7.11 Census 1990 occupation distribution

Data source: Census 1990 PUMS 1 percent sample downloaded from ICPSR

Code: Based on 2000 Census occupation codes^a

Sample: Adult white female ages 25–64 who reported an occupation

Census 1990	
Occupation Category based on Census 2000 occupation codes	Percentage
Managerial (001–099)	10.23
Professional (100–359)	23.69
Med. (MD, DDS (301, 306))	0.25
Law (210, 211)	0.41
Col & U Teacher (220)	0.64
Other professional occupations	22.39
Sales (470–499)	12.14
Office (500–599)	27.16
Service (360–469)	15.43
Farming (600–619)	0.37
Construction (620–769)	2.32
Transportation (900–979)	2.10
Production (770–899)	6.60
Self-employed ^b (percent)	8.55

Notes

^aThe Census 2000 industry and occupation classifications were completely revised compared to 1990. They are now based on the 1997 NAICS (North American Industry Classification System) and the 2000 SOC (Standard Occupational Classification) coding structures. The 1990 system was based on the 1987 SIC (Standard Industrial Classification Manual) and the 1980 SOC (Standard Occupational Classification Manual). In order to compare the change of occupation distribution over time, we converted the Census 1990 occupation category into Census 2000 occupation category based on the published crosswalks from the U.S. Census website. The crosswalk we used is “The Relationship Between the 1990 Census and Census 2000 Industry and Occupation Classification Systems, Technical Paper #65” (http://www.census.gov/hhes/www/ioindex/tp65_report.html) and “Occupation Table Crosswalks for Comparing 1990 to 2000 Census Data” (http://www.census.gov/hhes/www/ioindex/occcross_menu.html). One caveat about using the template provided by the census website is that the conversion factors in the template are based on the employed persons age 16 and over in Census 1990 data. Those conversion factors may not be appropriate when applied to Jews

^bSelf-employed include “Self-employed in unincorporated business or company;” “Self-employed in incorporated business or company;” “Unpaid family worker”

Table 7.12 NJPS 2000 occupation distribution

Data source: NJPS 2000

Code: Based on 2000 Census occupation codes

Sample: Adult male Jews ages 25–64 who reported an occupation and whose religion at birth is Jewish^a

NJPS 2000	
Occupation Category based on Census 2000 occupation codes	Percentage
Managerial (1–52, exclude 34, 38, 41, 47, 511, 515) ^b	14.78 ^c
Professional (53–175, plus 34, 38, 41, 47, 508, 510, 512)	52.99
Med. (MD, DDS (148, 152))	4.76
Law (113, 114)	5.31
Col & U Teacher (117)	1.88
Other professional occupations	41.04
Sales (238–255)	18.50
Office (256–306)	3.08
Service (176–237, 513, 514)	3.85
Farming (307–315)	0.22
Construction (316–390)	2.76
Transportation (472–505)	2.15
Production (391–471, plus 509)	1.67
Self-Employed ^d (percent)	23.23

Notes

^aReligion born is Jewish if the person is Jewish by religion/ethnicity and at least one of parents is Jewish^bPartial list for the occupation codes used in this table. For a complete list, refer to the answer to question Q289_A in NJPS 2000 questionnaire: 34 (compliance officers), 38 (management analysts), 41 (accountants and auditors), 47 (insurance underwriters), 508 (military enlisted tactical operations and air/weapons specialists and crew members), 509 (military occupation, rank not specified), 510 (computers no further information), 511 (executives no further information), 512 (professional no further information), 513 (supervisor no further information), 514 (technician no further information), 515 (self-employed no further information)^cAll numbers are weighted using personal weights. (variable “wt3presp”)^dA person is self-employed if the answer to question q293_a is 2 (self employed) or 4 (in a family business without pay)

Table 7.13 NJPS 2000 occupation distribution

Data source: NJPS 2000

Code: Based on 2000 Census occupation codes

Sample: Adult female Jews ages 25–64 who reported an occupation and whose religion at birth is Jewish^a

NJPS 2000	
Occupation Category based on Census 2000 occupation codes	Percentage
Managerial (1–52, exclude 34, 38, 41, 47, 511, 515) ^b	15.91 ^c
Professional (53–175, plus 34, 38, 41, 47, 508, 510, 512)	51.37
Med. (MD, DDS (148, 152))	2.07
Law (113, 114)	3.33
Col & U Teacher (117)	0.83
Other professional occupations	45.14
Sales (238–255)	12.89
Office (256–306)	12.12
Service (176–237, 513, 514)	4.74
Farming (307–315)	0.00
Construction (316–390)	1.68
Transportation (472–505)	0.59
Production (391–471, plus 509)	0.34
Self- Employed ^d (percent)	11.27

Notes

^aReligion born is Jewish if the person is Jewish by religion/ethnicity and at least one of parents is Jewish^bPartial list for the occupation codes used in this table. For a complete list, refer to the answer to question Q289_A in NJPS 2000 questionnaire: 34 (compliance officers), 38 (management analysts), 41 (accountants and auditors), 47 (insurance underwriters), 508 (military enlisted tactical operations and air/weapons specialists and crew members), 509 (military occupation, rank not specified), 510 (computers no further information), 511 (executives no further information), 512 (professional no further information), 513 (supervisor no further information), 514 (technician no further information), 515 (self-employed no further information)^cAll numbers are weighted using personal weights. (variable “wt3presp”)^dA person is self-employed if the answer to question q293_a is 2 (self employed) or 4 (in a family business without pay)

Table 7.14 Census 2000 occupation distribution

Data source: Census 2000 PUMS 1 percent sample downloaded from ICPSR

Code: Based on 2000 Census occupation codes

Sample: Adult white male ages 25–64 who reported an occupation

Census 2000	
Occupation Category based on Census 2000 occupation codes	Percentage
Managerial (001–099, exclude 056, 071, 080, 086) ^a	15.09 ^b
Professional (100–359, plus 056, 071, 080, 086, 980, 981, 982)	19.74
Med. (MD, DDS (301, 306))	0.93
Law (210, 211)	1.10
Col & U Teacher (220)	0.93
Other professional occupations	16.78
Sales (470–499)	10.39
Office (500–599)	6.04
Service (360–469)	9.13
Farming (600–619)	0.89
Construction (620–769)	18.72
Transportation (900–979)	8.99
Production (770–899, plus 983)	11.01
Self-employed ^c (percent)	14.02

Notes

^aPartial list for the occupation codes used in this table. For a complete list, refer to Census 2000 occupation list: Code 056 (compliance officers), 071 (management analysts), 080 (accountants and auditors), 086 (insurance underwriters), 980 (military officer and special tactical operations leaders/ managers), 981 (military first-line enlisted military supervisors/managers), 982 (military enlisted tactical operations and air/weapons specialists and crew members), 983 (military occupation, rank not specified)

^bAll the numbers are weighted using personal weight (variable “pweight”)

^cSelf-employed include “Self-employed in unincorporated business or company;” “Self-employed in incorporated business or company;” “Unpaid family worker”

Table 7.15 Census 2000 occupation distribution

Data source: Census 2000 PUMS 1 percent sample downloaded from ICPSR

Code: Based on 2000 Census occupation codes

Sample: Adult white female ages 25–64 who reported an occupation

Census 2000	
Occupation Category based on Census 2000 occupation codes	Percentage
Managerial (001–099, exclude 056, 071, 080, 086) ^a	10.96 ^b
Professional (100–359, plus 056, 071, 080, 086, 980, 981, 982)	28.47
Med. (MD, DDS (301, 306))	0.36
Law (210, 211)	0.52
Col & U Teacher (220)	0.92
Other professional occupations	26.67
Sales (470–499)	11.10
Office (500–599)	25.06
Service (360–469)	15.41
Farming (600–619)	0.32
Construction (620–769)	0.84
Transportation (900–979)	2.03
Production (770–899, plus 983)	5.80
Self-Employed ^c (percent)	8.62

Notes

^aPartial list for the occupation codes used in this table. For a complete list, refer to Census 2000 occupation list: Code 056 (compliance officers), 071 (management analysts), 080 (accountants and auditors), 086 (insurance underwriters), 980 (military officer and special tactical operations leaders/ managers), 981 (military first-line enlisted military supervisors/managers), 982 (military enlisted tactical operations and air/weapons specialists and crew members), 983 (military occupation, rank not specified)

^bAll the numbers are weighted using personal weight (variable “pweight”)

^cSelf-employed include “Self-employed in unincorporated business or company;” “Self-employed in incorporated business or company;” “Unpaid family worker”

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Chapter 8

The Linguistic and Economic Adjustment of Soviet Jewish Immigrants in the United States, 1980–2000



Barry R. Chiswick and Michael Wenz

Introduction

This study constitutes an extension of earlier work by one of the authors on the economic status of turn-of-the-twentieth century Russian Jewish immigrants, as well as work on Soviet Jewish immigrants to the United States in the late twentieth century (Chiswick 1991, 1992, 1993, 1997, 1999). The specific purpose of this chapter is to continue this line of research on the linguistic and labor market adaptation of adult male Soviet Jewish immigrants in the United States in the post-1965 period.¹ Linguistic

This is a revision of the original article published in *Research in Labor Economics*, 24, 2006, pp. 179–216. Co-authored with Michael Wenz. I am responsible for the current version.

Earlier versions of this chapter were presented at the Conference on Soviet and Post-Soviet Jewry, Hebrew University, Jerusalem, December 28–30, 2003, the Conference on Immigration, Minorities, and Social Exclusion, Bar-Ilan University, June 27–28, 2004, and the Fourteenth World Congress of Jewish Studies, Jerusalem, August 2005.

Chiswick acknowledges the research support of the Institute of Government and Public Affairs, University of Illinois. Comments on earlier version from Carmel U. Chiswick, Allen Glicksman, and Mark Tolts are appreciated.

¹Analyses using a similar methodology have been conducted for the Hebrew language proficiency and labor market earnings of Jewish immigrants in Israel. See Chiswick (1988) and Chiswick and Repetto (2001) for analyses of the 1972 and 1983 Censuses of Israel. Unfortunately, the 1995 Census did not include any questions on language usage or language proficiency. The U.S. and Israel studies are not strictly comparable because of differences in the Census questionnaires, the nature of immigration into these two countries, the relative magnitudes of the immigration flows after the collapse of the Soviet Union (small for the U.S., large for Israel), and the differences in the local (native) populations. Israel policy regarding intensive efforts to promote Hebrew language usage among immigrants was relaxed with regards to the Russian-speaking immigrants who arrived following the collapse of the FSU. For a discussion of this implicit change in policy see Glinert (1995).

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B. R. Chiswick (ed.), *Jews at Work*, Studies of Jews in Society 2,

https://doi.org/10.1007/978-3-030-41243-2_8

adaptation, that is, the acquisition of English language proficiency, is important for many reasons, including increasing access to US schooling and job training and success in the labor market, whether measured by employment or earnings. Moreover, it is important for acquiring US citizenship and thereby expanding job opportunities and increasing political influence. Labor market success is an important element in a family's economic well-being and determines current consumption, as well as having an influence on marital formation and stability, fertility, and parental investments in the human capital of their children.

The data under study are from the 2000 Census of Population of the United States, Public Use Microdata Sample (Census 2003), 5 percent random sample of the population, as well as comparable data from the 1980 and 1990 Censuses.²

Migration From The Former Soviet Union

The Extent of Migration

With the impending and actual collapse of the Soviet Union in 1989 a massive exodus began of the Jewish population. Between 1989 and 2003, 1.6 million Jews and their non-Jewish relatives left the former Soviet Union (FSU), 200,000 each in 1990 and 1991 alone, with the numbers declining thereafter to only 35,000 in 2003 (Tolts 2004a, b). The primary destination was, of course, Israel, which received over 950,000, or 61 percent of the emigrants. The emigration data suggest that about 315,000 Jews and their non-Jewish relatives left the FSU for the United States, or about 20 percent of the emigrants. Another 160,000 (10 percent) went to Germany and about 20,000 went to Canada, with the remainder settling in a wide range of destinations.³

From the start of official record keeping in the United States in 1820, to the present, approximately, 4.0 million people are recorded as having immigrated (permanent resident aliens) to the United States from the Russian Empire or the FSU (Table 8.1). The peak decade was 1901–1910 when 1.6 million immigrants were recorded, followed by 1911–1920 with 0.9 million immigrants (Table 8.2). Immigration from the Soviet Union declined sharply thereafter, with less than 600

²In principle, data from the National Jewish Population Survey (NJPS) 2000/2001 can be used to study the economic status of Soviet Jewish immigrants. The NJPS 2000/2001, however, provides a relatively smaller sample of Soviet Jews. Of the 5, 148 respondents, both male and female aged 18 and over, only 281 were born in the FSU. This would provide too small a sample for the statistical analysis of adult (age 25–64) men. There is no more recent national data on Jews with information on earnings.

³With the demise of the Soviet Union and the reunification with East Germany, Germany instituted a special immigration program to attract Soviet Jews to rebuild the German Jewish community (see Tress 1995). In 2005, the German government was taking steps to effectively close this program (Bernstein 2005).

Table 8.1 Immigration to the United States from Russia and the Soviet Union, 1820–2002^a

Time Period	Number of Immigrants
1820–1830	89
1831–1840	277
1841–1850	551
1851–1860	457
1861–1870	2512
1871–1880	39,284
1881–1890	213,282
1891–1900	505,290
1901–1910	1,597,306
1911–1920	921,201
1921–1930	61,742
1931–1940	1370
1941–1950	571
1951–1960	671
1961–1970	2465
1971–1980	38,961
1981–1990	57,677
1991–2000	462,874
2001	55,099
2002	55,464
Total	4,017,143

Source: US Department of Justice, 1993 Statistical Yearbook of the Immigration and Naturalization Service, Washington, DC., September 1994; US Department of Justice, 2001 Statistical Yearbook of the Immigration and Naturalization Service, Washington, DC., February 2003; and US Department of Homeland Security, 2002 Yearbook of Immigration Statistics, Washington, DC., October 2003

^aIndividuals granted permanent resident alien status. Includes all constituent units of the Russian Empire and of the FSU

recorded in the 1940s, rising to nearly 700 in the 1950s, 2500 in the 1960s, 39,000 in the 1970s, 58,000 in the 1980s, and nearly 463,000 in the 1990s (1991–2000), for a total of 560,000 over the period 1965–2000. Because of these trends, the analysis is limited to those who first came to the United States to stay in 1965 or later.

The 2000 Census suggests that there were about 700,000 people living in the United States who were born in the former Soviet Union. They may have entered with permanent resident alien visas or under other visas and provisions of immigration law, and some of these subsequently became permanent resident aliens. A large proportion entered as refugees or asylees (Table 8.2).

Table 8.2 Soviet refugee and asylee arrivals and admissions, FY 1961–2002

Year	Dept of Justice ^a	Dept of State ^b
1961–69	456	
1970	209	
1971	88	
1972	228	
1973	591	
1974	2221	
1975	3209	6211
1976	5882	7450
TQ 1976	1208	
1977	5296	8191
1978	9931	10,688
1979	27,135	24,449
1980	28,692	28,444
1981	11,244	13,444
1982	2838	2756
1983	1449	1409
1984	791	715
1985	674	640
1986	833	787
1987	3728	3694
1988	18,880	20,421
1989	39,831	39,553
1990	53,130	50,716
1991	57,587	38,661
1992	66,026	61,298
1993	51,983	48,627
1994	NA	43,470
1995	NA	35,716
1996	NA	29,536
1997	NA	27,072
1998	NA	23,349
1999	NA	17,220
2000	NA	15,103
2001	NA	15,749
2002	NA	23,150
Total	394,140	598,519

Source: US Department of Justice, 2001 Statistical Yearbook of the Immigration and Naturalization Service, Washington, DC, February 2003, Table 24. US Department of Homeland Security, Yearbook of Immigration Statistics, 2002, Washington, DC, October, 2003

^aSoviet refugee and asylee approvals, fiscal year 1961–1993. TQ1976 means transition quarter when fiscal year was adjusted to start October 1 rather than July 1

^bRefugee admissions from the Soviet Union, 1976–2002, including all republics from the FSU.

The Refugee Experience

Many who sought to leave the Soviet Union would not have had an incentive to leave if not for the anti-Semitism and generalized repression. Many were motivated, at least in part, by these factors and not simply conventional economic incentives. There had been a pent up demand for emigration from the Soviet Union, but there had been little expectation that it could be realized. Most emigrants had a limited ability to prepare for the move because of the seemingly arbitrary nature of the Soviet bureaucracy and the apparent randomness as to whose application for an exit visa would be approved, or when it would be approved. Many who sought to leave before the collapse of the Soviet Union experienced various degrees of reprisals and persecution, including loss of their jobs and imprisonment or internal exile. The unexpected and sudden opening for emigration with the collapse of the Soviet Union was accompanied by fears that the door could close at any time accompanied by a resurgence of anti-Semitism and repression. Thus, the Soviet Jewish migrants to the United States are more appropriately characterized as refugees than as economic migrants.

Refugees have a different adjustment in the destination than do economic migrants (Chiswick 1978, 1979). They have more skills specific to the origin and fewer skills that are destination specific or internationally transferable. As a result, at arrival they would be expected to have lower levels of human capital specific to the destination, including language skills, and hence lower earnings than economic migrants with similar measured characteristics. As they make implicit and explicit investments in the destination to increase the transferability of previously acquired skills and to create new skills, it would be expected that they would exhibit a more rapid improvement in language skills and earnings than economic migrants. Yet, because refugees are likely to be less favorably selected for economic success in the destination than otherwise similar economic migrants, it would be expected that the gap between them and economic migrants would narrow, but never close (Chiswick 2000).

Moreover, because of the lesser degree of the transferability of the skills acquired in the origin in school and on the job (labor market experience) among refugees, the effects of these variables on their earnings in the US would differ from that of economic migrants. In particular, refugees would be expected to have a smaller effect of schooling and pre-migration experience on earnings than would be the case for economic migrants.

While Soviet Jewish immigrants would reflect these refugee characteristics, these might be offset by the different labor market characteristics that have been exhibited by Jews in the US, whether immigrants or native born. American Jews have had high rates of occupation and earnings mobility, have a larger effect of schooling on earnings, and have obtained higher earnings, compared with observationally similar non-Jews (Chiswick 1999). As a result the linguistic and labor market progress of Soviet Jewish immigrants in the United States, in comparison to other (non-Jewish) economic migrants would be expected to reflect both their refugee and Jewish experiences and backgrounds.

Who Is a Soviet Jew?

The first step in an analysis of “Soviet Jews” in the United States is to define each of the two terms. For the purpose of this study, persons born in any of the constituent republics of the FSU are referred to as “Soviet immigrants”. Thus, the analysis is not to be limited to those born in “Russia” loosely defined or in the Russian Federation.

Defining Jews is more problematic. The Census of the United States, unlike censuses in some other countries, such as Australia, Canada, and Israel, has never asked religion. In the 2000 Census microdata file anyone who responds to the question on ethnic ancestry by revealing a religion is assigned the same ancestry code (998) as all other religious responses. Any response indicating Jewishness, even if the response is “secular Jew”, is combined with and thereby masked with other religious responses.

Yet, clearly, not all respondents from the FSU are Jews. Those who report an Armenian ancestry or who report that they speak Armenian or Ukrainian at home are not likely to be Jewish. Thus, for a first approximation for the purposes of this paper, persons born in the FSU who do not report an Armenian ancestry, or Armenian or Ukrainian as a language spoken at home are the subject of this analysis and for simplicity of exposition are considered “Soviet Jews”⁴ (Chiswick 1993, 1997).

This study is limited to the analysis of adult (aged 25–64) males. For younger and older persons school enrollment and retirement decisions have a major impact on labor supply and choice of jobs, and hence earnings. Similarly, the labor market attachment of women is strongly influenced by marital status and child care responsibilities. Analyses of these labor supply decisions are beyond the scope of this study.

Descriptive Statistics

Table 8.3 reports the means and standard deviations of selected variables relevant for the analysis. The Soviet Jewish immigrants, as defined here, are less proficient in English than either European or Asian immigrants. Among the Soviet Jews, 73 percent reported that they speak only English at home or speak another language, but speak English “very well” or “well” (Tables 8.3 and 8.4). Twenty-seven percent reported that they spoke English “not well” or “not at all”. In contrast, 89 percent of the European immigrants and 82 percent of the Asian immigrants satisfy this definition of English proficiency. Among those with earnings, the Soviet Jews earned

⁴According to the 2000 Census, the ethnic origins (ancestry) of the adult (aged 25–64) males born in the Soviet Union who immigrated in 1965 or later were 41 percent Russian, 20 percent Ukrainian, 11 percent Armenian, 10 percent response indicating a religion, 6 percent no ancestry reported, and 13 percent other responses. By languages spoken in the home, “only English” was reported by 4 percent, Russian 72 percent, Armenian 9 percent, Ukrainian 7 percent, Yiddish 0.2 percent, and all other languages 8 percent. There was little variation in the reported ancestry or language by sub-period of immigration. See Appendix Tables 8.9 and 8.10.

Table 8.3 Selected characteristics of adult males who immigrated since 1965 by region of birth, 2000

Variable ^a	FSU ^b	Europe (Excluding FSU)	Asia	Latin America	Total ^c
(A) Means and S.D. ^a					
Age	42.4 (10.8)	42.4 (10.4)	41.1 (10.3)	38.3 (9.6)	39.6 (10.0)
Education (years)	14.8 (3.2)	13.6 (3.8)	14.1 (4.0)	9.3 (4.7)	11.5 (4.9)
Earnings (\$)	37,555 (48,691)	50,889 (61,390)	42,370 (53,979)	22,966 (29,191)	32,704 (45,018)
Log of earnings	9.35 (2.30)	9.95 (1.98)	9.65 (2.08)	9.19 (1.90)	9.43 (1.99)
Weeks worked	46.5 (11.1)	47.6 (9.9)	46.8 (10.7)	45.3 (11.6)	46.1 (11.2)
(B) Percents					
Period of Immigration					
1995–2000	31.2	22.6	19.1	17.8	19.4
1990–1994	38.3	14.5	18.3	17.0	17.5
1985–1989	12.7	13.2	17.0	21.2	18.8
1980–1984	5.9	11.9	18.4	17.4	16.8
1975–1979	9.6	11.0	15.1	11.9	12.6
1970–1974	1.7	12.8	8.0	9.4	9.1
1965–1969	0.7	14.1	4.2	5.3	5.8
Total	100.0	100.0	100.0	100.0	100.0
Married	73.8	68.9	67.4	56.3	61.1
Speaks English ^d	72.7	88.8	81.9	57.3	69.6
With children at home	50.6	44.3	54.3	67.6	60.2
Rural (non-metropolitan area) residence	0.5	0.8	0.6	1.6	1.2
Southern states	10.1	20.5	19.9	32.6	27.6
Unemployed ^e	4.3	2.8	3.1	4.9	4.1
Sample size	9384	42,911	125,487	250,828	451,844

Source: 2000 Census of Population, Public Use Microdata Sample, 5 percent sample

^aMean values. Standard Deviations within parentheses. Percents with specific characteristics^bFSU excludes persons of Armenian ancestry or who speak Armenian or Ukrainian at home^cTotal includes groups not shown separately (23,234 observations), primarily from Canada and Oceania^dSpeaks only English at home or speaks another language but speaks English very well or well^eUnemployed as a percent of the labor force

nearly \$37,600 in 1999, considerably less than the earnings of other European (\$50,900) and Asian (\$42,400) immigrants, but substantially more than Latin American immigrants (\$23,000).

The Soviet Jewish immigrants have some characteristics that would enhance their language proficiency and earnings potential, but other characteristics that

Table 8.4 Fluency in English among adult male immigrants who immigrated since 1965 by Region of Origin (percent)^a

English Fluency	FSU ^b	Europe (Excluding FSU)	Asia	Latin America	All
Speaks only English at home	4.5	32.3	7.4	10.7	13.4
Speaks another language at home and speaks English:					
Very well	30.1	36.6	45.3	22.0	31.1
Well	37.8	19.9	29.4	24.6	25.1
Not well	22.5	9.6	15.4	28.2	21.4
Not at all	4.3	1.6	2.5	14.5	9.0
Total	100.0	100.0	100.0	100.0	100.0
Sample size	8373	42,590	124,735	250,826	451,844

Source: 2000 Census of Population, Public Use Microdata Sample, 5 percent sample

Note: Detail may not add to total due to rounding

^aAll immigrants include groups not shown separately

^bFSU excludes persons of Armenian ancestry and persons who speak Armenian or Ukrainian at home

would have a negative impact. Their educational level is very high, an average of 14.8 years of schooling, far greater than even the 14.1 years among Asian immigrants, the 13.6 years among other European immigrants, or the 11.5 years among all (including Soviet) immigrants. On the other hand, the Soviet immigrants had a very short period of residence in the US. In 2000, among those who immigrated in 1965 or later, 70 percent of the Soviet Jews had been in the US 10 or fewer years, in contrast to 37 percent overall. Moreover, the Russian language is more “distant” from English than that of most other European immigrants, and hence it may be more difficult for them to learn English, although it is less distant than the Asian languages.

The two measures of employment tell a similar story. Among those who worked, the weeks worked in 1999 were lower for Soviet Jews (46.5 weeks) than for European (47.6 weeks) or Asian (46.8 weeks) immigrants, although greater than among Latin American immigrants (45.3 weeks). Among those in the labor force in the reference week, the last week in March 2000, 4.3 percent of the Soviet Jewish immigrants were unemployed, in contrast to 2.8 percent and 3.1 percent for European and Asian immigrants, respectively.

Table 8.4 provides greater detail on the English language proficiency of immigrants. The Soviet Jews are least likely to speak only English at home (4.5 percent compared to 13.4 percent for all immigrants) and are more likely (26.8 percent) than European and Asian immigrants to report that they speak English “not well” or “not at all (11.2 and 17.9 percent, respectively). Only the Latin American immigrants have a greater proportion (42.7 percent) in these two least proficient categories.

Appendix Tables 8.9, 8.10, 8.11 report the ethnic ancestry, language spoken at home if it is not exclusively English and the republic of birth for the sample of

Soviet Jews under study by sub-period of immigration to the US since 1965. There appears to be relatively little variation in these characteristics across the sub-periods.⁵

Methodology for the Statistical Analysis

A multivariate statistical analysis (ordinary least-squares regression analysis, OLS) is used to compare Soviet Jewish immigrants to other immigrants, when other measured variables are held constant. That is, controlling for factors such as age, schooling, marital status, and duration in the United States, do Soviet Jews differ in English language proficiency and earnings from other immigrants?⁶

The statistical analysis uses the adult (aged 25–64) male respondents in the 2000 Census Public Use Microdata Sample, 5 percent sample of the population, as the unit of observation. The means and standard deviations for the dependent and explanatory variables are reported in Table 8.3.

Language skills are measured by a dichotomous variable defined to equal unity for those who speak only English at home or if they speak another language they speak English “very well” or “well”. It is zero for those who speak English “not well” or “not at all” (see Table 8.4).

The earnings variable is the natural logarithm of annual earnings in 1999, where earnings are the sum of wage, salary, and self-employment income. Those who reported zero earnings or did not work in 1999 are deleted from the analysis. Those who reported earnings of less than \$100, including the negligible number reporting negative earnings, were assigned a value of \$100 since the natural logarithm is not defined for zero or negative values.⁷

The econometric model for the analysis of language proficiency is based on earlier research that specifies three fundamental concepts (Chiswick and Miller 1998). These are exposure to the destination language, efficiency in destination language acquisition, and economic incentives for learning the destination language. In the empirical application the measurable variables reflecting these concepts include two continuous variables, years of schooling and years of age, and a set of dichotomous variables. The dichotomous variables include marital status (whether married, with spouse present), whether there are children under age 18 currently living in the

⁵The very low proportion reporting Yiddish reflects the very rapid decline in the use of Yiddish by Russian/Soviet Jews during the twentieth century. By the 1970s, “for the great majority of contemporary Soviet Jews (80 percent of our respondents), Russian is the native language”, with the proportion being greater for younger Jews. Yiddish was spoken primarily by older Jews or when younger Jews were speaking with their parents (Karklins 1987, p. 29).

⁶The schooling data cannot be decomposed into pre- and post-migration schooling, although given the age at migration there is likely to be little post-migration schooling among Soviet Jews.

⁷Given the high labor force participation rate of 25–64 year old men, the deletion of those who did not work has little impact on the analysis.

household, and whether the respondent lives in a rural area or a southern state (the swath of 17 states from Texas to the Atlantic Ocean, from Maryland to Florida, including Washington, DC).⁸

The Census asks, when did this person come to the United States to stay? The census does not ask the type of visa used to enter the United States or whether permanent resident status was obtained. Given that many Soviet Jews entered the United States as asylees only to become permanent resident aliens (immigrants) at a later date, the census question is more appropriate for this analysis than would be the year the respondent obtained permanent resident alien or immigrant status. Since few Soviet Jews subsequently left the United States to return to the FSU or go to a third country, such as Israel, the emigration from the United States of Soviet immigrants does not pose a selectivity problem (Ahmed and Robinson 1994; Mulder 2003).⁹

Variables for duration in the United States are central to the analysis and they are entered as period of arrival dichotomous variables.¹⁰ This specification was chosen to permit a finer determination of non-linearities than would a quadratic specification of a continuous duration variable. Moreover, it increases comparability with earlier research on Soviet Jews in the United States. When duration is held constant, the age variable reflects the effect of age at migration on English language proficiency.

Another key variable is country of birth. A person born in any of the republics that constituted the FSU (other than those who reported Armenian ancestry or language or the Ukrainian language) is considered to be a Soviet Jewish immigrant (FSU).¹¹ Data are not available on when the person left the FSU or on country of last permanent residence, so it is not possible to identify whether there was a destination prior to coming to the US. In this analysis, the country categories Europe and Asia constitute all of Europe and Asia, other than the designated parts of the FSU. Other countries of origin groups are Canada, Latin America (including the Caribbean), and other countries (Africa, Oceania, etc.). Europe other than the FSU serves as the benchmark.

⁸ "Rural residence" is defined as living on a farm in the 2000 Census analysis and living in a rural area (farm or non-farm) in the 1980 and 1990 Census analyses.

⁹ Tolts (2004a) also finds a very low re-migration rate of Soviet Jewish immigrants who arrive in Israel.

¹⁰ The period of arrival categories used here are: 1996–2000, 1991–1995, 1987–1990, 1985–1986, 1980–1984, 1975–1979, 1970–1974, and 1965–1969. For the proportion of the sample who arrived in each interval, see Appendix Table 8.12.

¹¹ In the 2000 Census, unlike previous censuses, there is republic of birth codes for each of the 15 republics in the FSU, as well as a generic "USSR" code. Excluding those reporting Armenian by ancestry or language or that they speak Ukrainian at home, 46 percent reported the Russian Republic, 29 percent the Ukraine, 6 percent the USSR, 5 percent Belarus, and 14 percent reported having been born in the other 12 republics (Appendix Table 8.11). In the post-World War II censuses until 2000 only the three Baltic Republics (Estonia, Latvia, and Lithuania) were separately identified from the rest of the Soviet Union because the U.S. State Department did not recognize their incorporation into the Soviet Union.

The econometric analysis of earnings is based on the human capital earnings function, modified for immigrant adjustment (Chiswick 1978). The natural logarithm of annual earnings in 1999 is regressed on years of schooling completed, years of potential labor market experience (age minus schooling minus 5 years), and its square, the natural logarithm of weeks worked, and dichotomous variables as defined above for being proficient in English, married spouse present, living in a rural area and living in a southern state. The same dichotomous variables are used, as defined above, for period of arrival and country of origin. Controlling for period of arrival, the labor market experience variable measures the effect on earnings in 1999 of experience in the country of origin.

Econometric Analysis

Language – Soviet and Other Immigrants

The results of the multiple regression analysis for adult males for the dependent variable, proficient in English, are reported in Tables 8.5 and 8.6. The variable is unity for those who speak only English at home or who speak another language but speak English very well or well, otherwise the English fluency variable is zero.

Table 8.5 reports the equation for all immigrants by sub-period and for the whole period 1965–2000. As shown in column (1), consistent with what has been found elsewhere for immigrants, English language proficiency increases with years of schooling (3.5 percentage points more are proficient for each extra year of schooling). Proficiency is lower for those who immigrated at an older age. Five years older at immigration is equivalent to about one fewer year of schooling. Men who are married are more proficient (by 4 percentage points), but children at home detracts from their proficiency (by 2.6 percentage points per child).

Duration in the United States has a major impact on English language proficiency. The coefficients are highly statistically significant and show a consistent gradient of increased proficiency with duration in the US, with the effect of an extra year in the United States becoming smaller the longer the duration of residence. With those who immigrated in 1980–1984 as the benchmark, other variables the same, the most recent immigrants (1996–2000) were 24 percentage points less proficient in 2000, or the equivalent of the effect of seven years of schooling. The earliest cohort, 1965–1969 immigrants, was 12 percentage points more proficient than the 1996–2000 cohort or the equivalent of 3.5 years of schooling.

Other variables the same, Soviet immigrants are about 10.4 percentage points less likely to be proficient in English than other European immigrants. They are even less proficient than Asian immigrants (Asians are at a 7.7 percentage points disadvantage compared to European immigrants), but less disadvantaged than those from Latin America (17.3 percentage point differential compared to European immigrants).

Table 8.5 Regression analysis of fluency in English among adult males who immigrated since 1965: 2000

Dependent Variable = ENGSPK 2000 Census		1965–2000		1965–1979		1980–1989		1990–2000	
Immigration Period	Variable	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
	CONSTANT	0.7238 (169.12)	0.7241 (169.07)	0.7980 (114.50)	0.7980 (114.50)	0.7618 (94.72)	.07615 (94.69)	0.6048 (89.67)	0.6063 (89.89)
	EDUCYRS	0.0349 (255.53)	0.0349 (255.37)	0.0335 (150.77)	0.0335 (150.74)	0.0363 (147.89)	0.0363 (147.87)	0.0342 (139.85)	0.0342 (139.83)
	AGE	–0.0067 (–99.89)	–0.0067 (–100.05)	–0.0068 (–61.96)	–0.0068 (–61.94)	–0.0079 (–62.49)	–0.0079 (–62.50)	–0.0056 (–49.66)	–0.0057 (–49.82)
	IM95_00	–0.2405 (–120.21)	–0.2380 (–118.47)					–0.1041 (–50.05)	–0.1006 (–47.84)
	IM90_94	–0.1396 (–68.98)	–0.1415 (–69.46)					^a	^a
	IM85_89	–0.0631 (–31.99)	–0.0637 (–32.24)			–0.0614 (–28.54)	–0.0617 (–28.60)		
	IM75_79	0.0573 (26.28)	0.0571 (26.08)	–0.0382 (–17.28)	–0.0381 (–17.20)				
	IM70_74	0.0958 (39.38)	0.0959 (39.38)	^a	^a				
	IM65_69	0.1230 (42.54)	0.1232 (42.57)	0.0381 (14.19)	0.0382 (14.21)				
	IM95_00*FSUJEW		–0.0908 (–7.64)						–0.1118 (–10.15)

Table 8.5 (continued)

Dependent Variable = ENGSPK 2000 Census		Immigration Period		1965–2000		1965–1979		1980–1989		1990–2000	
				1965–2000		1965–1979		1980–1989		1990–2000	
CANADA		0.0705	0.0704			–0.0015	–0.0017	0.0397	0.0401	0.1263	0.1234
		(14.45)	(14.42)			(–0.21)	(–0.23)	(3.57)	(3.61)	(15.99)	(15.62)
OTHER		0.0584	0.0584			–0.0052	–0.0054	0.0195	0.0199	0.0882	0.0854
		(16.59)	(16.53)			(–0.86)	(–0.89)	(2.79)	(2.85)	(15.62)	(15.11)
SAMPLE SIZE		451,843	451,843			124,512	124,512	140,887	140,887	166,684	166,684
STANDARD ERROR		0.3925	0.3924			0.3344	0.3344	0.3983	0.3983	0.4178	0.4176
R ²		0.2723	0.2726			0.2586	0.2586	0.2299	0.2299	0.2739	0.2744
ADJUSTED R ²		0.2722	0.2725			0.2585	0.2585	0.2298	0.2298	0.2739	0.2743

Note: t-ratios in parentheses
Source: 2000 US Census of Population, Public Use Microdata Sample, 5 percent Sample
^aOmitted as benchmark; 1980–1984 and Europe are benchmarks unless otherwise noted

Table 8.6 Regression analysis of English fluency among adult males who immigrated since 1965: 2000, 1990, 1980

Dependent Variable = ENGSPK					
Immigration Period:	2000 Census 1965–2000		1990 Census 1965–1989		1980 Cenus 1965–1979
Variable	(1)	(2)	(1)	(2)	(1)
CONSTANT	0.7177 (74.75)	0.7188 (74.87)	0.6031 (114.99)	0.6027 (114.94)	0.5243 (41.60)
EDUCYRS	0.0347 (113.15)	0.0347 (113.12)	0.0356 (192.66)	0.0355 (192.59)	0.0388 (89.92)
AGE	–0.0066 (–44.38)	–0.0067 (–44.49)	–0.0067 (–73.07)	–0.0067 (–73.30)	–0.0050 (–20.26)
IM96_00	–0.2492 (–52.88)	–0.2443 (–51.50)			
IM91_95	–0.1626 (–35.26)	–0.1639 (–35.27)			
IM87_90	–0.0876 (–18.99)	–0.0891 (–19.23)	–0.1387 (–51.87)	–0.1341 (–49.77)	
IM85_86	–0.0347 (–6.07)	–0.0345 (–6.04)	–0.0698 (–23.07)	–0.0693 (–22.85)	
IM75_79	0.0544 (11.07)	0.0546 (11.06)	0.0796 (33.12)	0.0789 (32.64)	–0.0956 (–19.20)
IM70_74	0.1069 (19.64)	0.1073 (19.68)	0.1312 (50.16)	0.1316 (50.21)	^b
IM65_69	0.1222 (19.04)	0.1222 (19.02)	0.1690 (58.01)	0.1695 (58.13)	0.0574 (11.18)
IM96_00*FSUJEW		–0.1580 (–6.36)			
IM91_95*FSUJEW		–0.0147 (–0.53)			
IM87_90*FSUJEW		0.03281 (1.00)		–0.2527 (–10.31)	
IM85_86*FSUJEW		0.0036 (0.04)		–0.0456 (–0.85)	
IM75_79*FSUJEW		–0.0386 (–0.99)		–0.0249 (–1.00)	
IM70_74*FSUJEW		–0.0421 (–0.58)		–0.0346 (–0.87)	
IM65_69*FSUJEW		0.0514 (0.57)		0.0263 (0.45)	
MARRSP	0.0397 (12.98)	0.0399 (13.05)	0.0404 (20.53)	0.0409 (20.78)	0.0134 (2.17)
RURAL	0.0188 (1.58)	0.0189 (1.59)	0.0177 (4.55)	0.0177 (4.55)	0.0102 (1.16)

(continued)

Table 8.6 (continued)

Dependent Variable = ENGSPK					
Immigration Period:	2000 Census 1965–2000		1990 Census 1965–1989		1980 Census 1965–1979
Variable	(1)	(2)	(1)	(2)	(1)
Dependent Variable = ENGSPK					
Immigration Period:	2000 Census 1965–2000		1990 Census 1965–1989		1980 Census 1965–1979
Variable	(1)	(2)	(1)	(2)	(1)
SOUTH	0.0083 (2.79)	0.0083 (2.79)	0.0174 (8.99)	0.0175 (9.03)	0.0030 (0.60)
CHILD	–0.0149 (–4.98)	–0.0147 (–4.88)	–0.0267 (–14.16)	–0.260 (–13.80)	0.0093 (1.98)
FORMAR ^a					–0.0431 (8.32)
FSU	–0.0979 (–10.00)	–0.0492 (–2.18)	–0.1374 (–16.05)	–0.0273 (–1.31)	–0.1384 (–7.47)
ASIA	–0.0739 (–15.05)	–0.0754 (–15.20)	–0.0632 (–22.43)	–0.0631 (–22.43)	–0.0431 (–6.97)
LATAMER	–0.1768 (–36.33)	–0.1777 (–36.38)	–0.1514 (–54.87)	–0.1514 (–54.88)	–0.1445 (–25.13)
CANADA	0.0825 (7.73)	0.0812 (7.60)	0.0739 (11.05)	0.0739 (11.06)	0.1265 (9.26)
OTHER	0.0621 (7.91)	0.0601 (7.73)	–0.0228 (–6.10)	–0.0227 (–6.08)	0.0202 (2.41)
SAMPLE SIZE	90,383	90,383	227,554	227,554	35,915
STANDARD ERROR	0.39307	0.3929	0.3879	0.3877	0.3790
R ²	0.2711	0.2718	0.2649	0.2656	0.3047
ADJUSTED R ²	0.2710	0.2716	0.2649	0.2655	0.3044

t-ratios in parentheses

^aVariable cannot be reconstructed for 1990, 2000 Census

^bomitted as benchmark; benchmark is 1980–1984 and EUROPE unless otherwise noted

Source: 2000 Census of Population, Public Use Microdata Sample, 5% Sample. 1990 Census of Population, Public Use Microdata Sample, 5% Sample

1980 Census of Population, Public Use Sample, B and C Sample Files Combined, 2% Sample

It is possible to test whether the effect of duration in the US on proficiency in English differs between Soviet and other immigrants. The statistical analysis (Table 8.5, column 2) shows that during the first four years the negative effect on proficiency of being an immigrant is much greater for Soviet Jews than it is for other immigrants. Compared to other recent European immigrants, Soviet Jews who arrived in 1995–2000 are 20 percentage points less proficient ($-0.1050 - 0.0908 = 0.20$). Soviet Jews experience a steeper improvement in proficiency with duration in the US so that the disadvantage in 2000 is only 5.5 percentage points ($-0.1050 + 0.0502 = 0.055$) for those who immigrated in 1990–1994 (6–10 years in the US), and 4.8 percentage points ($-0.1050 + 0.0574 = 0.048$) for those who immigrated 1985–1989 (11–15 years in the US). Indeed, the very large proportion of

Soviet immigrants in the US a short period of time and the very low English proficiency at arrival of this group are very important determinants of the overall low proficiency among Soviet immigrants.

The analysis was also performed for sub-periods within the 1965–2000 period (Table 8.5). For each of these sub-periods the effects of schooling, age at immigration, marital status, and children are quite similar.¹² That is, their partial effects on proficiency in 2000 do not appear to vary by period of immigration. The effects of duration do vary by period of immigration. One fewer year in the US has a larger negative effect on proficiency the more recently the immigrant cohort arrived in the US, which is consistent with the non-linear effect of duration on proficiency.

The results reported here for the 2000 Census can be compared with analyses reported previously for Soviet Jews and other immigrants who came to the US in 1965 or later using the microdata files from the 1980 and 1990 Censuses (Chiswick 1993, 1997) (see Table 8.6). The effects on English language proficiency of schooling, age, marital status, and rural residence are virtually identical across the three censuses, although the positive effect of being married was much smaller in the 1980 Census and the positive effects of living in the South is smaller in 2000 than in 1990.¹³ The negative effects of children in the household are also smaller in absolute value in 2000 than in 1990, but it was not significant in 1980. The strong positive effect of duration in the US on proficiency is also observed in these earlier censuses.

The 10 percentage point disadvantage of being from the FSU compared to another part of Europe in the 2000 data is somewhat smaller than the 14 percentage points in the 1980 and 1990 Censuses. When the interaction terms of Soviet origin with duration are added, the Soviet intercept is a highly significant –5 percentage points in 2000, compared to a non-significant +3 percentage points in 1990. The negative effect of being in a particular immigrant cohort compared to an earlier arrival cohort diminishes from the 1980 to the 2000 Census as the cohorts are in the US a longer period of time. Most striking is that in 1990, the only Soviet-duration of residence interaction term whose coefficient was large or statistically different from the benchmark (1980–1984) was the most recent cohort, 1987–1990 (coefficient of –25 percentage points). Ten years later, compared to the same benchmark, the 1987–1990 interaction term has a coefficient of only 3 percentage points and it is not statistically significant.

These results suggest that the sharp gradient of English language proficiency with duration in the US is not a consequence of declining proficiency among more recent cohorts. Rather it appears to be reflecting a longitudinal or adjustment effect, that is, the acquisition of English language proficiency as a cohort has a longer duration in the US. Moreover, this initial deficiency and speed of adjustment (improvement) appear to be more intense for Soviet Jews than for other immigrants. This may reflect their refugee motivated migration, the limited ability to prepare for the emigration because of the arbitrary nature of the Soviet bureaucracy, and the unexpected and sudden opening for emigration from the Soviet Union, with uncertainty as to how long emigration would be possible.

¹² A notable exception is the much larger positive effect of being married in the most recent cohort, 1990–2000.

¹³ For a discussion of the regional distribution of immigrants and their language skills, see Chiswick and Miller (2005).

Earnings – Soviet and Other Immigrants

The analysis of earnings (Table 8.7, column 1) indicates that an extra year of schooling raises the earnings of immigrants by about 4.6 percent, that earnings increase at a decreasing rate with an increase in total labor market experience, that earnings rise by about 0.85 percent for each one percent increase in weeks worked (about one half of a week), and that earnings increase with duration of residence in the US. Indeed, compared to those who immigrated in 1980–1984, those who recently arrived (immigrated 1996–2000) have about 16 percent lower weekly earnings, while those who immigrated in 1965–1969 had about 11 percent higher weekly earnings.

The effects of country of origin are quite large. Compared to European immigrants, those from the Soviet Union had weekly earnings that were nearly 20 percent lower, other measured variables being the same. Only Latin American immigrants had a larger earnings disadvantage (about 32 percent) compared to those from Europe, while Canadian immigrants showed a large earnings advantage over Europeans (about 13 percent). Other factors that resulted in higher earnings are being proficient in English (about 17 percent), being married (21 percent), living in an urban area (8 percent), and living outside the south (3 percent).

Other variables the same, as shown in Table 8.7, column 2, an extra year of schooling is associated with 7.0 percent higher earnings for the Soviet Jewish immigrants, in contrast to the 4.6 percent for other immigrants, and the difference is highly statistically significant ($t = 11.0$). Also, other things the same, the earnings of Soviet Jewish immigrants are much lower (and the difference is highly significant) than those of other immigrants who came in the same time period during the first few years in the US (immigrated 1996–2000 or 1991–1995). The magnitude diminishes but does not disappear for those who have been in the United States for 10 or more years in 2000.

Thus, the earnings gap between Soviet and other immigrants varies with duration in the US and level of schooling. At the mean level of schooling of Soviet immigrants (14.8 years), those who immigrated in 1980–1984 (16–20 years in the US) had about 5 percent higher weekly earnings than other European immigrants (the partial effect is: $-0.3106 + (14.8)(0.0244) = 0.051$).

The comparison of these results with the 1990 and 1980 Census analyses is striking (Chiswick 1997) (Table 8.8). In 1990, the effect of schooling on earnings was larger for Soviet Jewish immigrants by 1.9 percentage points, in 1980 by 2.8 percentage points, and in 2000 by 2.6 percentage points, all of which were significantly different from zero, but not from each other. In 1990, the Soviet immigrant duration of residence interaction term for the most recent arrivals was large and highly significant compared to the benchmark (1980–1984 cohort), as was the case in 1980 (1970–1974 benchmark), but the differential shrank with duration. Although only in the US 6–10 years at the time of the 1990 Census, at the mean level of schooling for Soviet immigrants (14.9 years), the earnings of the 1980–1984 cohort of Soviet Jews was only 1 percent lower than that of other European immigrants. As in the

Table 8.7 Regression analysis of earnings among adult males who immigrated since 1965, 2000

Dependent Variable: LNEARN 2000 Census									
Immigration Period:		1965–2000		1965–1979		1980–1989		1990–2000	
Variable	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(2)
CONSTANT	6.248 (451.41)	6.248 (451.29)	6.030 (214.00)	6.030 (213.99)	6.581 (280.50)	6.578 (280.29)	6.143 (291.94)	6.142 (291.77)	
EDUCYRS	0.0461 (130.43)	0.0458 (129.27)	0.0547 (75.35)	0.0546 (75.03)	0.0438 (77.98)	0.0437 (77.63)	0.0415 (70.28)	0.0412 (69.59)	
EXP	0.0108 (22.35)	0.0108 (22.40)	0.0113 (11.34)	0.0113 (11.37)	0.0127 (14.85)	0.0127 (14.84)	0.0084 (10.62)	0.0084 (10.50)	
EXPSQ	–0.00017 (–19.61)	–0.00017 (–19.78)	–0.00014 (–8.20)	–0.00014 (–8.26)	–0.00022 (–14.06)	–0.00022 (–14.09)	–0.00016 (–10.21)	–0.00016 (–10.19)	
LNWW	0.8461 (314.94)	–0.8459 (314.93)	0.8656 (151.51)	0.8656 (151.51)	0.7757 (170.96)	0.7757 (170.96)	0.8879 (218.39)	0.8876 (218.35)	
IM95_00	–0.1554 (–35.35)	–0.1503 (–34.06)					–0.0530 (–12.56)	–0.0483 (–11.29)	
IM90_94	–0.1041 (–24.20)	–0.1027 (–23.71)							
IM85_89	–0.0434 (–10.46)	–0.0434 (–10.44)							
IM75_79	0.0562 (12.25)	0.0561 (12.18)	–0.0388 (–6.82)	–0.0392 (–6.88)	–0.0459 (–11.26)	–0.0457 (–11.16)			
IM70_74	0.0965 (18.68)	0.0986 (19.04)	^a	^a					
IM65_69	0.1184 (19.18)	–0.1214 (19.64)	0.0270 (3.87)	0.0277 (3.96)					
IM95_00*FSUJEW		–0.3447							–0.1395

(continued)

Table 8.7 (continued)

Dependent Variable: LNEARN 2000 Census									
Immigration Period:		1965–2000		1965–1979		1980–1989		1990–2000	
Variable		(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
IM90_94*FSUJEW			(-9.29)						(-5.85)
			-0.2299						
IM85_89*FSUJEW			(-6.36)						
			-0.1048				-0.0306		
			(-2.49)				(-0.68)		
IM75_79*FSUJEW			-0.1148		0.0101				
			(-2.61)		(0.13)				
IM70_74*FSUJEW			-0.2233		^a				
			(-2.80)						
IM65_69*FSUJEW			-0.2416		-0.1297				
			(-2.00)		(-0.94)				
ENGSPK	0.1742	0.1738	0.1371	0.1373	0.1643	0.1645	0.2007	0.2018	0.2007
	(54.05)	(53.92)	(18.18)	(18.21)	(32.43)	(32.48)	(40.27)	(40.27)	(40.04)
MARRSP	0.2115	0.2121	0.2661	0.2659	0.2168	0.2168	0.1707	0.1699	0.1707
	(78.13)	(78.35)	(47.16)	(47.14)	(49.57)	(49.58)	(39.13)	(38.95)	(39.13)
RURAL	-0.0804	-0.0807	-0.1349	-0.1348	-0.0536	-0.0536	-0.0741	-0.0740	-0.0741
	(-7.10)	(-7.12)	(-5.64)	(-5.64)	(-2.91)	(-2.91)	(-4.17)	(-4.16)	(-4.17)
SOUTH	-0.0288	-0.0292	-0.0551	-0.0552	-0.0230	-0.0231	-0.0162	-0.0158	-0.0162
	(-10.25)	(-10.37)	(-9.67)	(-9.68)	(-5.02)	(-5.03)	(-3.58)	(-3.49)	(-3.58)
FSU	-0.1850	-0.3106	-0.0309	-0.1983	-0.1178	-0.3136	-0.3448	-0.2545	-0.3448
	(-19.46)	(-15.30)	(-1.17)	(-3.17)	(-5.76)	(-7.36)	(-14.39)	(-21.26)	(-14.39)
ASIA	-0.1673	-0.1608	-0.0521	-0.0492	-0.2302	-0.2232	-0.2198	-0.2280	-0.2198
	(-36.48)	(-34.46)	(-6.23)	(-5.84)	(-27.39)	(-26.24)	(-28.93)	(-30.89)	(-28.93)

Variable	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
LATAMER	-0.3247 (-70.91)	-0.3211 (-69.62)	-0.2137 (-26.89)	-0.2122 (-26.65)	-0.3838 (-45.74)	-0.3789 (-44.86)	-0.3927 (-51.24)	-0.3881 (-50.10)
CANADA	0.1327 (-13.09)	-0.1371 (13.50)	0.0316 (1.76)	0.0333 (1.85)	0.1309 (6.31)	0.1366 (6.57)	0.2070 (13.47)	0.2131 (13.82)
OTHER	-0.2071 (-27.88)	-0.2025 (-27.16)	-0.0870 (-5.62)	-0.0849 (-5.47)	-0.2181 (-16.73)	0.2125 (16.25)	-0.3113 (-27.26)	-0.3054 (-26.93)
FSU*EDUCYRS		0.0244 (11.02)		0.0129 (2.29)		0.0174 (5.01)		0.0112 (6.31)
SAMPLE SIZE	398,520	398,520	110,840	110,840	145,315	145,315	142,363	142,363
STANDARD ERROR	0.7833	0.7831	0.8121	0.8120	0.7621	0.7769	0.7774	0.7772
R ²	0.3580	0.3583	0.3225	0.3226	0.3176	0.3217	0.3886	0.3888
ADJUSTED R ²	0.3580	0.3583	0.3224	0.3225	0.3175	0.3213	0.3885	0.3887

t-ratios in parentheses
Includes only immigrants who worked and had non-zero earnings in 1999
^aomitted as benchmark; benchmark is 1980–1984 and EUROPE unless otherwise noted
Source: 2000 Census of Population, Public Use Microdata Sample, 5% Sample
1990 Census of Population, Public Use Microdata Sample, 5% Sample
1980 Census of Population, Public Use Sample, B and C Sample Files Combined, 2% Sample

Table 8.8 Regression analysis of earnings among adult males who immigrated since 1965: 2000, 1990, 1980

Dependent Variable: LNEARN					
	<u>2000 Census</u>		<u>1990 Census</u>		<u>1980 Census</u>
Immigration Period:	<u>1965–2000</u>		<u>1965–1979</u>		<u>1980–1989</u>
Variable	(1)	(2)	(1)	(2)	(1)
CONSTANT	6.198 (200.12)	6.201 (200.29)	5.204 (303.00)	5.208 (303.01)	4.360 (102.18)
EDUCYRS	0.04507 (57.14)	0.0447 (56.49)	0.0480 (103.10)	0.0479 (102.62)	0.0462 (40.89)
EXP	0.0102 (9.40)	0.0103 (9.43)	0.0268 (42.81)	0.0267 (42.71)	0.0300 (19.77)
EXPSQ	–0.0002 (–8.72)	–0.0002 (–8.83)	–0.0004 (–34.33)	–0.0004 (–34.26)	–0.0005 (–16.88)
LNWW	0.8679 (145.45)	0.8675 (145.44)	0.9534 (270.03)	0.9526 (269.66)	1.048 (114.66)
IM96_00	–0.1598 (–15.34)	–0.1501 (–14.37)			
IM91_95	–0.1229 (–12.53)	–0.1205 (–12.19)			
IM87_90	–0.0692 (–7.13)	–0.0705 (–7.23)	–0.0949 (–16.32)	–0.0910 (–15.57)	
IM85_86	–0.0448 (–3.75)	–0.0429 (–3.59)	–0.0708 (–11.46)	–0.0698 (–11.28)	
IM75_79	0.0561 (5.42)	0.0557 (5.360)	0.1062 (21.85)	0.1069 (21.90)	–0.1345 (–13.12)
IM70_74	0.0913 (7.92)	0.0931 (8.06)	0.1787 (33.67)	0.1797 (33.78)	^a
IM65_69	0.1124 (8.17)	0.1152 (8.36)	0.1996 (33.64)	0.2006 (33.76)	0.0804 (7.60)
IM96_00*FSUJEW	–0.5036 (–6.39)				
IM91_95*FSUJEW	–0.3033 (–3.97)				
IM87_90*FSUJEW	–0.1352 (–1.60)		–0.3090 (–5.65)		
IM85_86*FSUJEW	–0.3156 (–1.73)		–0.1979 (–1.79)		
IM75_79*FSUJEW	–0.0911 (–0.95)		–0.1458 (–2.85)		
IM70_74*FSUJEW	–0.0100 (–0.06)		–0.1137 (–1.40)		
IM65_69*FSUJEW	–0.1193 (–0.56)		0.0029 (0.02)		

(continued)

Table 8.8 (continued)

Dependent Variable: LNEARN					
	2000 Census		1990 Census		1980 Census
Immigration Period:	1965–2000		1965–1979		1980–1989
Variable	(1)	(2)	(1)	(2)	(1)
ENGSPK	0.1755 (24.40)	0.1743 (24.24)	0.1723 (39.38)	0.1717 (39.25)	0.1632 (14.84)
MARRSP	0.2022 (33.38)	0.2030 (33.52)	0.2093 (57.12)	0.2099 (57.26)	0.1718 (16.11)
RURAL	–0.1159 (–4.51)	–0.1163 (–4.53)	–0.0183 (–2.36)	–0.0186 (–2.40)	–0.0190 (–1.03)
SOUTH	–0.0386 (–6.13)	–0.0389 (–6.19)	–0.0925 (–23.52)	–0.0925 (–23.51)	–0.0312 (–2.97)
FSU	–0.1937 (–9.11)	–0.2899 (–5.11)	–0.1759 (–9.36)	–0.3021 (–3.42)	0.0895 (–0.66)
ASIA	–0.1592 (–15.35)	–0.1559 (–14.89)	–0.1955 (–34.34)	–0.1953 (–34.32)	–0.1862 (–14.44)
LATAMER	–0.3224 (–31.39)	–0.3216 (–31.20)	–0.3227 (–57.83)	–0.3231 (–57.90)	–0.2612 (–21.63)
CANADA	0.1760 (7.92)	0.1777 (8.00)	0.0936 (6.99)	0.0937 (7.00)	0.1375 (4.83)
OTHER	–0.2180 (–13.14)	–0.2159 (–12.99)	–0.2511 (–32.60)	–0.2511 (–32.60)	–0.2276 (–13.03)
FSU*EDUCYRS		0.0256 (5.41)		0.0194 (3.79)	–0.0280 (–3.08)
SAMPLE SIZE	79,582	79,582	202,113	202,113	35,915
STANDARD ERROR	0.7830	0.7827	0.7456	0.7455	0.7898
R ²	0.3646	0.3652	0.4267	0.4268	0.3895
ADJUSTED R ²	0.3645	0.3650	0.4266	0.4268	0.3892

t-ratios in parentheses

*omitted as benchmark; 1980–1984 and EUROPE are benchmarks unless otherwise noted

Source: 2000 Census of Population, Public Use Microdata Sample, 5% Sample

1990 Census of Population, Public Use Microdata Sample, 5% Sample

1980 Census of Population, Public Use Sample, B and C Sample Files Combined, 2% Sample

2000 Census, the larger return from schooling narrowed the earnings gap between Soviet Jews and other immigrants in spite of a larger initial earnings disadvantage.

Among the Soviet immigrants (Table 8.8), the 31 percent greater earnings disadvantage of the 1987–1990 cohort compared to the 1984–1985 cohort in 1990, shrank to a marginally significant ($t = 1.6$) 14 percent disadvantage 10 years later in 2000. This too suggests that what is being observed is an immigrant assimilation process rather than a change (deterioration) in the earnings potential of more recent cohorts.

For most of the other explanatory variables their partial effects on earnings did not change by much across the three censuses. Perhaps the most dramatic change is

the increase in the negative effects of living in a rural area. This may be due to the change in the definition of rural from the old census definition of rural (farm and non-farm) to only those living on a farm.

Moreover, the lower initial earnings and the steeper rise in earnings with duration of residence in the US of the Soviet Jewish immigrants, compared with other immigrant groups, is a phenomenon to be expected among refugee populations. Since their motives for migrating are not strictly economic, refugees tend to be less prepared for the move, especially Soviet migrants, and to have skills that are less readily transferable to the destination.

Language and Earnings – Soviet Jewish Immigrants

Parallel analyses to those reported above were performed separately for just the Soviet Jewish immigrants (Appendix Tables 8.13 and 8.14). The statistical significance of many of the variables is reduced because of the much smaller sample size. Of particular interest is whether there are differences among Soviet immigrants depending on their reported ethnic ancestries. Excluding those of Armenian ancestry or language and Ukrainian language, four groups are defined, Russian (53 percent of the sample), Ukrainian (18 percent), a response that revealed a person's religion (12 percent), and all other responses (17 percent). Those of Russian ancestry serve as the benchmark. The coefficients and significance levels of the other variables do not change when the ethnic ancestry variables are entered into the equation.

In the language analysis, other variables the same, few differences are found in English language proficiency by ancestry (Appendix Table 8.13). Those of Ukrainian origin are 2 percentage points less proficient in English than those of Russian ancestry, but the difference is at the margin of being significant ($t = 1.7$). Those of "other ancestries" are one percentage point less proficient than the Russians, but this is not statistically significant ($t = 0.7$). There is no difference from those of Russian ancestry among those who gave a response indicating their religion (the coefficient indicates a 2.5 percentage point higher proficiency with $t = 1.8$).

The analysis of earnings, other variables being the same, presents a similar picture (Appendix Table 8.14). For the post-1965 immigrants, there is no difference in earnings between the Russian, Ukrainian, and religious revealing ancestries. Compared to the Russians, the Ukrainians had 2.1 percent lower earnings, but a $t = -0.7$; while those who gave a religious response had 4.5 percent higher earnings, but a $t = 1.3$. Only the heterogeneous group of "other ancestries" showed an earnings differential, a marginally significant ($t = 1.9$) 5.5 percent higher earnings.

The coefficient on the education variable in the earnings analysis limited to Soviet Jewish immigrants is about 7.3 percent, whether or not the Soviet ancestry variables are held constant. This is a very large coefficient for an immigrant population in the United States and is significantly greater than for other immigrants. That

it does not change when ancestry is held constant suggests that it holds across the ancestry groups that in this study are used to identify Soviet Jews.

Summary and Conclusion

This paper is been concerned with the English language proficiency and labor market earnings of adult (aged 25–64 years) male Soviet Jews who immigrated to the United States since 1965. The data for the empirical analysis are from the 2000 Census of Population, Public Use Microdata Sample, and is for a five percent sample of the population. Comparisons are made to earlier parallel analyses using the 1980 and 1990 Censuses. Because of the absence of direct information on who is Jewish or of Jewish ancestry, the empirical analysis is based on persons born in the FSU who are not of Armenian ancestry and do not speak Armenian or Ukrainian at home. This definition should capture most Soviet Jews but include few non-Jewish immigrants from the FSU.

The Soviet Jews were less proficient in English than other European and Asian immigrants. Under the definition of proficiency used in this study, 72 percent of the Soviet Jews were proficient, compared to 89 percent for European immigrants, 82 percent for Asian immigrants, and 57 percent for those from Latin America. Their earnings (at \$37,600 in 1999) were considerably less than the earnings of other European (\$50,900) and Asian immigrants (\$42,400), but were greater than the earnings of Latin American immigrants (\$23,000).

The much higher level of schooling of the Soviet immigrants would tend to enhance their English proficiency and earnings; 14.8 years for the Soviet Jews, compared to 14.1 for Asian immigrants, 13.6 years for European immigrants, and 9.3 years for Latin American immigrants. On the other hand, the refugee motivations for their move and their recency of arrival would tend to lower their English language skills and earnings. Among those who immigrated since 1965, 70 percent of the Soviet Jewish migrants were in the United States 10 or fewer years, compared to only 37 percent of those from Europe, 37 percent of the Asians, and 35 percent of the Latin Americans.

Multiple regression analysis is used to examine the effects of being a Soviet Jewish immigrant compared to coming from another region, when all other measured variables are held constant. It is found that recently arrived Soviet immigrants have a lower level of English proficiency than other European immigrants, but they have a faster rate of improvement with duration in the US. As a result, the difference virtually disappears for those in the United States from 16 to 20 years. The 1980 and 1990 Census data analyses show a similar pattern for recent immigrants. This appears to be a longitudinal phenomenon reflecting their refugee experience, rather than inherently poorer English proficiency that will persist among the most recent cohorts.

Thus, the low level of English proficiency among Soviet immigrants is due to the low proficiency among recent arrivals and the large proportion that recently arrived. It is a temporary and not a permanent phenomenon.

The analysis of earnings, other measured variables the same, also shows much lower earnings among recent Soviet Jewish immigrants, but a steeper improvement with duration in the United States. The Soviet immigrants have a much larger positive effect of schooling on earnings compared to other immigrants. An extra year of schooling raises the earnings of Soviet Jewish immigrants by about 7.3 percent, compared to only 4.6 percent for other immigrants. As a result there is an earnings catch-up coming sooner the higher the level of schooling. Similar patterns were found in the analyses for the 1980 and 1990 Censuses.

Again, this suggests that the earnings disadvantage of Soviet Jewish immigrants as a group is short-lived and is due to the low earnings of recent arrivals and the disproportionate number of recent arrivals in the 2000 Census.

Analyses of English language proficiency and earnings were also performed for those classified here as Soviet Jewish immigrants by the ancestry they reported in the 2000 Census: Russian, Ukrainian, an ancestry response that reveals one's religion, and all other ancestry responses. In the language analysis, there was essentially no difference in English proficiency, other variables the same, between those of Russian and "other ancestries", although those who indicated Ukrainian had slightly lower proficiency while those who indicated a religion were marginally more proficient. In the earnings analysis, other variables the same, there were no significant differences among these three groups, although the heterogeneous group of other ancestries showed a marginally significant 5 percent earnings advantage. The addition of ancestry variables to the language and earnings equations does not alter the effect of schooling.

Overall, it appears that Soviet Jewish immigrants adjust very well in the United States compared to other European immigrants. Their initial disadvantages in English language skills and earnings may be due to the refugee motivations for migration.¹⁴ With the passage of time this disadvantage disappears. For earnings it disappears most rapidly for those with higher levels of schooling. This very high level of schooling and the greater effect of schooling on earnings among Soviet Jewish immigrants compared to other immigrants parallels patterns found among Jews and non-Jews born in the US (Chiswick 1999). Thus, the Soviet Jews appear to be reflecting patterns that are specific to both refugees and Jews in the United States.

¹⁴ Lower initial English proficiency and earnings and a speedier improvement appear to be a general refugee phenomenon, although not the larger payoff from schooling (see Chiswick 1978, 1979; Chiswick and Miller 1998).

Appendix

Data from the 2000 Census analysis on immigrants to the US are given in Tables 8.9 to 8.14.

Table 8.9 Ancestry or ethnic origin of adult male Soviet immigrants who immigrated since 1965, 2000 (percent)

Ethnic Ancestry	Period of Immigration							
	1965–2000		1965–1979		1980–1989		1990–2000	
	All	Excl. Armenian/ Ukrainian ^a	All	Excl. Armenian/ Ukrainian ^a	All	Excl. Armenian/ Ukrainian ^a	All	Excl. Armenian/ Ukrainian ^a
Russian	41.1	52.6	36.7	49.9	39.1	51.9	41.4	53.2
Religion ^b	9.6	11.7	10.9	10.3	9.6	13.7	9.7	11.5
Armenian	10.8	–	12.7	–	17.1	–	9.8	–
Ukrainian	19.9	18.1	18.9	19.8	18.3	14.9	20.9	18.5
Not reported	5.8	5.6	6.7	8.4	7.3	6.9	5.4	4.8
Soviet Union, n.e.c. ^c	4.7	2.6	1.3	0.4	1.1	2.3	5.4	3.1
Lithuanian	1.5	1.5	0.8	1.1	1.3	1.8	1.5	1.5
Latvian	0.8	0.8	1.6	1.1	1.5	1.0	0.5	0.7
Polish	0.3	0.5	1.3	1.3	0.0	0.7	0.1	0.2
All other	5.5	6.7	9.1	7.5	4.7	6.7	5.3	6.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Detail may not add to total due to rounding

Source: 2000 Census of Population, Public Use Microdata Sample, 5 percent sample

^aExcludes persons of Armenian ancestry or who speak Armenian or Ukrainian at home

^bResponse to ancestry question indicating the person's religion or religious origin, ancestry code 998

^cIncludes Azerbaijani, Belorussian, Estonian, Ossetian, Moldavian, Tatar, Turkestani, Uzbek, Georgian, Tajik, and those who reported Soviet Union

Table 8.10 Language spoken in the home by adult males who immigrated from the FSU Since 1965, 2000 (percent)^a

Period of Immigration				
Language	1965–2000	1965–1979	1980–1989	1990–2000
English only	4.0	9.2	5.0	3.1
Russian	71.6	63.3	69.4	73.4
Armenian	9.4	12.7	17.3	8.0
Ukrainian	7.2	2.5	2.5	8.4
Yiddish	0.2	0.4	0.0	0.1
Other	7.6	11.9	5.8	7.0
Total	100.0	100.0	100.0	100.0

Note: Detail may not add to total due to rounding

Source: 2000 Census of Population, Public Use Microdata Sample, 5 percent sample

^aLanguage currently spoken in the home other than or in addition to English

Table 8.11 Republic of birth of immigrants from the FSU, adult males, by period of immigration who immigrated since 1965, 2000

Republic of Birth	1965–2000		1965–1979		1980–1989		1990–2000	
	Non-Armenian/ Ukrainian ^a	All	Non-Armenian/ Ukrainian ^a	All	Non-Armenian/ Ukrainian ^a	All	Non-Armenian/ Ukrainian ^a	All
Estonia	4	4	2	2	1	1	1	1
Latvia	120	120	24	24	40	40	56	56
Lithuania	155	155	18	18	35	35	102	102
Armenia	17	919	3	133	8	298	6	488
Azerbaijan	114	168	7	7	15	16	92	145
Belarus	417	421	15	15	87	87	315	319
Georgia	106	121	7	8	14	15	85	98
Moldova	228	236	25	25	24	24	179	187
Russia	3540	3610	428	434	636	647	2476	2529
Ukraine	2180	2848	319	344	361	425	1500	2079
USSR ^b	454	488	100	102	115	121	239	265
Kazakhstan	22	23	0	0	2	3	20	20
Kyrgyzstan	5	5	0	0	0	0	5	5
Tajikistan	8	8	0	0	3	3	5	5
Turkmenistan	1	2	0	0	0	0	1	2
Uzbekistan	250	256	15	15	26	26	209	215
Total	7621	9384	963	1127	1367	1741	5291	6516

Source: 2000 US Census of Population, Public Use Microdata Sample, 5 percent sample

^aExcludes persons reporting Armenian ancestry, or who speak Armenian or Ukrainian at home^bPersons reporting USSR rather than a specific republic**Table 8.12** Period of immigration for all adult male immigrants born in the FSU, including Armenians, 2000 (percent)

Period of Immigration	All Years	Since 1965
1995–2000	37.4	38.7
1990–1994	26.3	27.4
1985–1989	12.7	13.2
1980–1984	8.2	8.6
1975–1979	6.1	6.4
1970–1974	2.7	2.8
1965–1969	2.1	2.2
1960–1964	1.9	—
1950–1959	1.5	—
Before 1950	0.9	—
Total	100.0	100.0

Note: Detail may not add to total due to rounding

Source: 2000 Census of Population, Public Use Microdata Sample, 5 percent sample

Table 8.13 Regression analysis of fluency in English among adult Soviet Jewish males who immigrated since 1965

Dependent Variable = ENGSPEAK 2000 Census								
Immigration Period:	1965–2000		1965–1979		1980–1989		1990–2000	
Variable	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
CONSTANT	0.7773 (22.19)	0.7793 (21.83)	0.7989 (13.55)	0.7897 (13.12)	0.8356 (14.06)	0.8364 (13.76)	0.6814 (17.25)	0.6921 (17.07)
EDUCYRS	0.0391 (26.09)	0.0388 (25.57)	0.0172 (6.05)	0.0173 (6.06)	0.0285 (9.50)	0.0282 (9.25)	0.0452 (23.39)	0.0446 (22.81)
AGE	–0.0104 (–22.69)	–0.0104 (–22.74)	–0.0027 (–3.52)	–0.0027 (–3.57)	–0.0081 (–9.27)	–0.0081 (–9.32)	–0.0129 (–21.03)	–0.0129 (–21.08)
IM95_00	–0.3547 (–18.16)	–0.3515 (–17.97)					–0.2552 (–21.93)	–0.2544 (–21.83)
IM90_94	–0.1057 (–5.62)	–0.1031 (–5.47)						
IM85_89	–0.0408 (–1.93)	–0.0388 (–1.83)			–0.0378 (–2.15)	–0.0373 (–2.11)		
IM75_79	0.0386 (1.77)	0.0428 (1.96)	0.0051 (0.22)	–0.0081 (0.35)				
IM70_74	0.0662 (1.81)	0.0678 (1.85)						
IM65_69	0.1089 (2.01)	0.1063 (1.95)	0.0033 (0.08)	–0.0021 (–0.05)				
MARRSP	0.0123 (1.08)	0.0128 (1.12)	–0.0078 (–0.39)	–0.0063 (–0.31)	0.0141 (0.65)	0.0142 (0.66)	0.0161 (1.06)	0.0160 (1.06)
RURAL	0.0247 (0.38)	0.0255 (0.39)	0.1399 (0.87)	0.1328 (0.83)	–0.0421 (–0.33)	–0.0395 (–0.31)	0.0126 (0.15)	0.0136 (0.17)
SOUTH	0.0186 (1.40)	0.0187 (1.40)	–0.0021 (–0.08)	–0.0025 (–0.10)	0.0210 (0.73)	0.0218 (0.75)	0.0198 (1.17)	0.0197 (1.16)
CHILD	–0.0074 (–0.77)	–0.0070 (–0.72)	0.0252 (1.44)	0.0252 (1.44)	–0.0108 (–0.59)	–0.0110 (–0.60)	–0.0085 (–0.66)	–0.0075 (–0.58)
UKRAINE		–0.0198 (–1.68)		0.0047 (0.23)		0.0053 (0.22)		–0.0315 (–2.04)
RELIG		0.0245 (1.75)		0.0121 (0.45)		0.0312 (1.29)		0.0258 (1.37)
OTHANCS		0.0081 (0.67)		0.0197 (0.90)		0.0061 (0.28)		0.0041 (0.25)
SAMPLE SIZE	6492	6492	856	856	1240	1240	4394	4394
STANDARD ERROR	0.3440	0.3438	0.2235	0.2238	0.2833	0.2835	0.3733	0.3731
R^2	0.2347	0.2356	0.0651	0.0661	0.1196	0.1208	0.2422	0.2436
ADJUSTED R^2	0.2333	0.2338	0.0563	0.0539	0.1146	0.1136	0.2410	0.2419

t-ratios in parentheses

^aomitted as benchmark; 1980–1984 is benchmark unless otherwise noted

Source: 2000 Census of Population, Public Use Microdata Sample, 5% Sample

Table 8.14 Regression analysis of earnings among adult Soviet Jewish males who immigrated since 1965

Dependent Variable = ENGSPEAK 2000 Census								
Immigration Period:	1965–2000		1965–1979		1980–1989		1990–2000	
Variable	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
CONSTANT	5.024 (40.48)	5.010 (39.92)	4.229 (10.11)	4.176 (9.91)	4.798 (14.20)	4.833 (14.10)	5.029 (38.91)	5.016 (38.32)
EDUCYRS	0.0732 (19.17)	0.0736 (19.00)	0.0791 (6.36)	0.0789 (6.34)	0.0885 (9.74)	0.0880 (9.52)	0.0683 (15.32)	0.0689 (15.26)
EXP	0.0082 (2.02)	0.0081 (2.00)	0.0246 (1.85)	0.0236 (1.78)	0.0107 (1.08)	0.0111 (1.11)	0.0042 (0.89)	0.0043 (0.90)
EXPSQ	–0.00022 (–2.74)	–0.00023 (–2.74)	–0.00062 (–2.37)	–0.00061 (–2.33)	–0.00024 (–1.17)	–0.00024 (–1.19)	–0.00014 (–1.44)	–0.00014 (–1.45)
LNWW	1.045 (42.21)	1.044 (42.17)	1.175 (13.51)	1.179 (13.55)	1.021 (12.96)	1.017 (12.85)	1.028 (38.19)	1.027 (38.14)
IM95_00	–0.3272 (–6.76)	–0.3215 (–6.64)					–0.1233 (–4.63)	–0.1257 (–4.71)
IM90_94	–0.2093 (–4.60)	–0.2024 (–4.44)						
IM85_89	–0.0228 (–0.45)	–0.0175 (–0.34)			–0.0147 (–0.28)	–0.0102 (–0.19)		
IM75_79	0.0736 (1.40)	0.0836 (1.58)	0.0549 (0.58)	0.0650 (0.67)				
IM70_74	0.0270 (0.31)	0.0259 (0.29)						
IM65_69	0.0592 (0.45)	0.0399 (0.30)	0.0711 (0.43)	0.0430 (0.26)				
ENGSPK	0.3133 (10.43)	0.3112 (10.35)	0.3109 (2.16)	0.3028 (2.11)	0.2654 (3.11)	0.2660 (3.12)	0.3258 (9.98)	0.3241 (9.93)
MARRSP	0.1413 (5.68)	0.1441 (5.78)	0.2947 (3.69)	0.2962 (3.69)	0.2275 (3.86)	0.2304 (3.89)	0.0879 (3.03)	0.0903 (3.11)
RURAL	–0.1490 (–0.95)	–0.1531 (–0.97)	0.3456 (0.52)	0.3252 (0.49)	0.1459 (0.39)	0.1520 (0.40)	0.2357 (–1.34)	–0.2430 (–1.38)
SOUTH	–0.0358 (–1.11)	–0.0364 (–1.13)	–0.0263 (–0.26)	–0.0173 (–0.17)	–0.0229 (–0.27)	–0.0212 (–0.25)	0.0403 (–1.11)	–0.0422 (–1.16)
UKRAINE		–0.0206 (–0.73)		0.0795 (0.94)		–0.0933 (–1.33)		–0.0224 (–0.67)
RELIG		0.0451 (1.33)		0.2817 (2.53)		–0.0199 (–0.28)		–0.0196 (0.48)
OTHANCS		0.0547 (1.88)		0.1122 (1.23)		–0.0174 (–0.26)		0.0677 (1.96)
SAMPLE SIZE	6492	6492	856	856	1240	1240	4394	4394

Table 8.14 (continued)

Dependent Variable = ENGSPEAK 2000 Census								
Immigration Period:	1965–2000		1965–1979		1980–1989		1990–2000	
Variable	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
STANDARD ERROR	0.8294	0.8292	0.9326	0.9305	0.8392	0.8396	0.8038	0.8036
R^2	0.3436	0.3442	0.2736	0.2796	0.2319	0.2330	0.3622	0.3630
ADJUSTED R^2	0.3422	0.3425	0.2650	0.2685	0.2262	0.2255	0.3609	0.3612

t-ratios in parentheses

Includes only immigrants who worked and had non-zero earnings in 1999

Source: 2000 Census of Population, Public Use Microdata Sample, 5% Sample

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Chapter 9

The Rise and Fall of the American Jewish PhD



Barry R. Chiswick

Introduction

It is an honor for me to be the recipient of the Marshall Sklare Award. Although it is my misfortune that I never met him, I am aware of Prof. Sklare's role as the "dean" of American Jewish sociology. The award named in his memory has been bestowed annually by the Association for the Social Scientific Study of Jewry (ASSJ) since 1992 on a long list of distinguished sociologists, demographers, anthropologists and historians who have advanced the field of the social science study of Jewry. I am especially appreciative of this award as I am the first "card carrying" economist to be so honored. I view this not as an award just for me, but as an acknowledgement of the return by economists to the social science study of Jewry. One cannot ignore the important research conducted decades ago by both Simon Kuznets and Arcadius Kahan on the economic status of Jews in the Russian Empire and the United States.¹

This is a revision of the original article published in *Contemporary Jewry*, 29(1), April 2009, pp. 67–84, based on my Marshall Sklare Memorial Lecture, Association for the Social Scientific Study of Jewry, Toronto, December 2007.

I appreciate the research assistance of Jidong Huang and Benjamin Yarnoff, and the comments received on an earlier draft from Carmel U. Chiswick, Rela Geffen, Paul Pieper, Jonathan Sarna, and Ira Sheskin. An earlier version of this paper was presented as the Marshall Sklare Memorial Lecture, at the annual meeting of the Association for the Social Scientific Study of Jewry, Toronto, December 2007.

¹For compilations of the research of Simon Kuznets and Arcadius Kahan on Jews in Russia and the United States, see Kuznets (2011) and Kahan (1986).

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But then, for several decades the Jewish studies and the economics literatures were devoid of research on the economics of Jews or Jewry.

This chapter is concerned with a topic of particular interest to the membership of the ASSJ, the increase and then the decline of Jews teaching in the colleges and universities in the United States. The first section below, explains the methodology of economics, and the origin of my interest in this topic. The source of the data for PhDs awarded, and the algorithm for identifying Jews in these data (Distinctive Jewish Names, DJN) are discussed in the second section. Data regarding the number of PhDs received over time, by major discipline, by Jews, and by Jews relative to all PhDs, are reported in several figures in the third section. This is followed by a section developing the model to be used for the multivariate analysis of the determinants of PhD production. The multiple regression analyses of the number of PhDs received by those identified as Jews and the ratio of these to all PhDs are then reported, followed by a section with summary and conclusions.

Economics and Jewish Studies

Economics is the study of the allocation of scarce resources among competing objectives. One scarce resource is time, and economists have become interested in the allocation by individuals of their time. An important use of time is investment in skills, including general human capital and religious human capital. Interesting work on the determinants and consequences of investment in religious human capital, including Jewish human capital, in recent years has been done by economists Laurence Iannaccone and Carmel Chiswick.

My research in Jewish studies has focused on earnings and the determinants and consequences of investments in skills, including formal schooling, language training, occupational attainment and labor market (on-the-job) training of American Jewry and Jewish immigrants in Israel. Jewish investments in one form of human capital, the PhD degree, is the subject of this lecture.

Economics is essentially an empirical area of inquiry that relies on the scientific method (Friedman 1957). Typically, there is an observation, often informal, about the world in which we live, which stimulates the development of a model or hypotheses to explain the observation, to be followed by empirical analysis using independent but real-world data to test the validity and robustness of the model or hypotheses. Economic models typically begin with the assumption that, subject to constraints, businesses seek to maximize profits and individuals seek to maximize their economic well-being or utility, where utility is not directly measurable but is an important concept.

My interest in the theme of this chapter, the “Rise and Fall of the American Jewish PhD” started with a set of interrelated observations. When I was a doctoral student of Economics at Columbia University, in the dim ages of the 1960s, a substantial proportion of my fellow graduate students were Jewish, as was the case at that time of young PhD economists in general, even outside New York City.² Yet, it

appeared to me that in recent decades this has not been the case. Moreover, I noticed that the Hillel Faculty Group in Chicago, that attracted Jewish faculty from many of the colleges and universities in the Chicago metropolitan area, has aged over the past nearly three decades of its existence. The same faces, a bit more wrinkled and with greyer hair, would attend year after year, with very little new blood. Finally, although clearly a select sample of academics, the membership of the ASSJ reflects the same problem—the scarcity of young scholars working in this area.

When I embarked on my project on the historical trends in the occupational attainment of American Jews, I included a separate tabulation of those in college and university teaching in the professional occupation category for the post-WWII period (Chiswick 1999, 2007). In spite of small sample sizes and problems of comparability over time, the data showed a rise in the post-WWII period in the proportion of Jewish men who were in college and university teaching up to the approximately 5% in the 1972–1987 pooled data from the NORC General Social Survey, in contrast to the 1% among non-Jewish white men. The proportion among Jews was about 3½% in the 1990 National Jewish Population Survey, and less than 2% in the 2000 National Jewish Population Survey, although that was twice the rate among white men in the 2000 Census of the United States. A more detailed examination of the NJPS data on men revealed that the college and university teachers age 25–64 in the 1990 NJPS tended to be older and many would have been older than 65 years in 2000. Meanwhile, what was not seen in the 2000 NJPS data was young male Jewish academics.

A similar pattern is found among Jewish women in the NJPS who reported an occupation. While the proportion of Jewish women in college and university teaching was over 2% in the 1990 NJPS, four times that of white women, by the 2000 NJPS it was less than 1%, about the same as white women (Chiswick 2007). Note that these declines in the proportion of Jews in college and university teaching came at a time when the proportion of Jews in other professional occupations was on the increase. From 1990 to 2000 the proportion of Jewish men in professional occupations other than college and university teaching increased from 39% to 51%, and for women from 40% to 50%. Thus, Jews aspiring to professional occupations have in recent decades, more so than before, entered fields other than college and university teaching. This appears to be a real finding and not an artifact of sampling variability or other sampling problems.

The question: What caused the rise and fall among Jewish academics? led to the question: What has happened in the post-WWII period to the receipt of PhDs by American Jews? While it is true that not all college and university teachers have PhDs, it has increasingly become a “union card” or job requirement, even in two-year institutions and small liberal arts colleges where academic-type research is neither required nor expected of the faculty. It is also true that many PhD recipients do not enter the US academic job market, but rather take jobs in government, the private (non-academic) sector or abroad. Yet, given the large proportion of new

²Marshall Sklare also received his PhD in Sociology from Columbia University, but in 1953.

PhDs who enter the academic job market, trends in PhD production can shed light on both the educational attainment and occupational patterns of American Jewish men and women.

Prior to World War II there was considerable discrimination against Jews in many sectors of the economy, including higher education.³ Jews experienced discrimination in access to colleges and universities, as both students and faculty.⁴ There was, however, also discrimination in access to employment in other sectors, including high level positions in heavy manufacturing, insurance (other than as salesmen), banking, engineering and law firms, among other sectors, with the exception of Jewish owned firms.⁵

Jews found niches in other sectors of the economy. These started as small enterprises that often required little start-up capital (e.g., retail trade, garment industry). Independent professional practice, such as law, medicine and accounting, also attracted Jews. Other sectors that Jews entered were not held in high social repute at that time, such as entertainment, including the theatre, vaudeville and movie industries.

What Jews did was to seek out, and at times create, niches where they could exercise their entrepreneurial and creative talents, subject to a minimum of discrimination. It appears that in the post-WWII period this discrimination gradually decreased, but with the decline coming earlier, and perhaps most intensely, in higher education.⁶ If Jews interested in advanced education would seek out the niches where discrimination against them would be least intense, it is hypothesized that in the early post-war years they would tend to obtain PhDs and enter academic employment.⁷ Later, as employment opportunities in other high level occupations became

³The economic analysis of discrimination was developed in Becker (1957). This lecture was delivered on the 50th anniversary of the publication of this classic study.

⁴Within the economics profession there are well known stories of discrimination in the 1940s against hiring Paul Samuelson at Harvard (he went on to establish the Economics Department at MIT) and Milton Friedman at UCLA. Both later received the Noble Prize in Economics. Diner (2004, p. 210) writes that: "Through the early 1930s no more than one hundred Jews held professional positions in American universities" and comments on substantial discrimination against Jews in college and university admission, prestigious law firms, banks, public utilities and many other sectors of the economy. Diner (2004, pp. 223–224) relates the difficulties of Lionel Trilling and Robert Merton (born Shkolnik) in academia. These barriers against Jewish men diminished in the early post-war years and largely disappeared by the late twentieth century. Freidenreich (2007) writes of the even greater discrimination against Jewish women in academia than against Jewish men until the 1970s. For discussions of the decline in anti-Semitism in academia and in general in the post-war period, see also Lipset (1955), Lipset and Ladd (1971), Shapiro (1992, Chap 3) and Chanes (1999).

⁵For a discussion of apparent greater discrimination against Jewish Harvard MBA graduates in less competitive sectors compared to more competitive sectors of the economy, see Alchian and Kessel (1962).

⁶In their analyses of the changes over time in "Jewish learning" (i.e., courses and research on Judaism and Jews) in the 19th and 20th centuries, Ritterband and Wechsler (1994) discuss the effects of anti-Semitism on the hiring of Jewish faculty.

available, the relative attractiveness of an academic career, and hence the demand for a PhD among Jews, would decline. This hypothesis suggests that the absolute number and the ratio of Jewish to all PhDs would initially increase and then decline over the course of the post-war years, other variables being the same.

Identifying Jewish PhDs

The PhD degree requires a doctoral dissertation, and these dissertations are deposited at University Microfilms, University of Michigan, Ann Arbor. The data recorded for each dissertation includes the author's name, dissertation title, field of study, degree granting institution, and year of completion. It is, therefore, possible to develop a list of the family names or surnames of PhD recipients by discipline (humanities, social science, physical science, education, and total) from American universities in each year for the post-WWII period.

For this project Jews are identified by using the Distinctive Jewish Name (DJN) technique. Himmelfarb et al. (1983) attribute the DJN technique to Samuel C. Kohs in 1942 and report the results of several studies that the list of 35 names (the names used here except for Schwartz) are held by 11–15% of Jews, with about 90% of individuals with these surnames being Jewish. If these proportions still hold, and if receipt of the PhD among Jews is independent of their surname, it suggests that the number of Jews receiving the PhD is 7–9 times greater than the number of DJN PhDs. Himmelfarb et al. (1983) compare the socio-economic and demographic characteristics of those on the DJN list with other Jews in the 1970 National Jewish Population Survey and conclude that the differences “were quite small.” The DJNs differ by little from the other Jews in terms of ritual observance and Jewish identification. Jews identified from organizational membership lists (e.g., synagogue memberships, Federation lists, etc.) differ by more from Jews not on these lists than DJNs differ from other Jews. A more recent study of the pros and cons of use of the 36 DJNs is found in Sheskin (1998).

In this study a person is identified as Jewish if the person's middle name or surname is on the DJN list. This, of course, results in two types of errors. One error is identifying as Jewish individuals with a surname or middle name on the list who are not Jewish, whether or not the person may have had a Jewish ancestor. An example would be the former Senator from Maine and Secretary of Defense, William Cohen. The second error is missing Jews who do not have a DJN. An example would be Barry Chiswick. Expanding the DJN list of names reduces the second error (missing

⁷A consequence of discrimination against Jewish faculty in many of the premier colleges and universities was that non-discriminating institutions could attract outstanding Jewish scholars. This accounts for the extraordinarily high quality of the faculty at City College of New York (and the other public institutions that were later combined as the City University of New York) in the 1930s and early post-WWII years. As discrimination against Jews (and African-Americans) declined in higher education, the competitive edge in recruiting and retaining outstanding Jewish and other minority faculty held by the original non-discriminating institutions declined. Freidenreich (2007) comments on the lesser degree of discrimination against Jewish women in the public colleges in New York City than elsewhere.

Jews), but increases the first error (incorrectly identifying non-Jews as Jewish). A relatively conservative DJN list of only 36 names is used in this study.

Other problems with the DJN technique include name changes due to marriage. The check for DJNs among middle names is intended to identify Jewish women whose original surname is a DJN and is used as a middle name, but whose current surname is not on the list. In this instance marriage is a two-edged sword. A former colleague, Cohen, changed her name to O'Neill upon marriage before completing her PhD, and would not be identified as Jewish, while non-Jewish women adopting a DJN husband's surname would be so identified. Moreover, the DJN list focuses on Ashkenazic names, and hence Sephardic and Israeli names would not be identified, although most American Jews are of Ashkenazic origin.

Most important, the DJN technique is likely to provide an undercount of Jews receiving PhDs.⁸ Using the short list of 36 names it is likely that more Jews are missed than are individuals incorrectly identified as Jews. The purpose of this project, however, is not to count the number of Jewish PhDs, but rather to examine the trends over time. To the extent that the ratio of DJNs receiving the PhD to all Jews receiving the PhD is invariant over the post-WWII period, there is no bias in trends over time. While there has been a process of "Americanization" of Jewish names, if most of these name changes occurred at or shortly after immigration, given the immigration history of American Jews, the bias in the post-WWII list of names would be minimal.

The dissertation records do not contain information on the person's gender. The US Social Security Administration, however, has used birth records to compile frequency distributions for the names of males and females. Using data from 1960–1969, the list of the top 300 males names (88% of all males born in the 1960s) and the top 300 females names (78% of all females born in the 1960s) is used to identify gender. While the frequency distribution for males and females names used by Jewish parents undoubtedly differs from that of non-Jewish parents, these lists are used for both Jews and non-Jews as a comparable list just for Jews is not available. Three categories are created: males, females and gender not identified (name not on either list).⁹

⁸There are no estimates at the national level of the extent to which the DJN technique underestimates the number of Jews. Sheskin (1998) reports several estimates based on local studies which indicate that the size of the undercount is greater the greater the proportion of Jews in the population. In communities with very few Jews, but many people of German ancestry, it may even generate an overcount.

⁹For the PhD recipients, 1950–2004, the percent distribution of the top 300 male and the top 300 female given names:

Gender	Surname		
	DJN	Not DJN	Total
Males	47.2	63.6	63.4
Females	39.1	35.6	35.7
Not among Top 300 names by gender	13.7	0.8	0.9
Total	100.0	100.0	100.0

The list of the DJNs and the source for the top 300 names for males and for females are reported in the Statistical Appendix.

Descriptive Statistics

The graphs in Figs. 9.1 and 9.2 record the number of DJNs receiving a PhD by year from 1950 to 2004 (Fig. 9.1) and the ratio of the DJNs to total PhDs (Fig. 9.2) in the United States in all fields. Figures 9.3 and 9.4 show these data separately for the

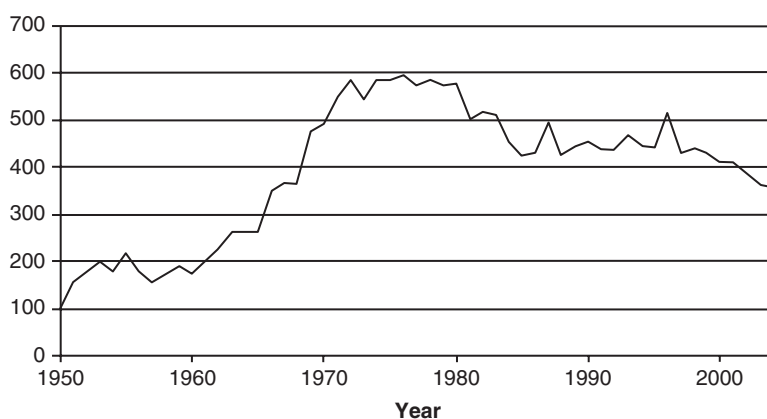


Fig. 9.1 Number of PhDs with DJN (All Fields), 1950–2004. Source: University Microfilms, University of Michigan at Ann Arbor

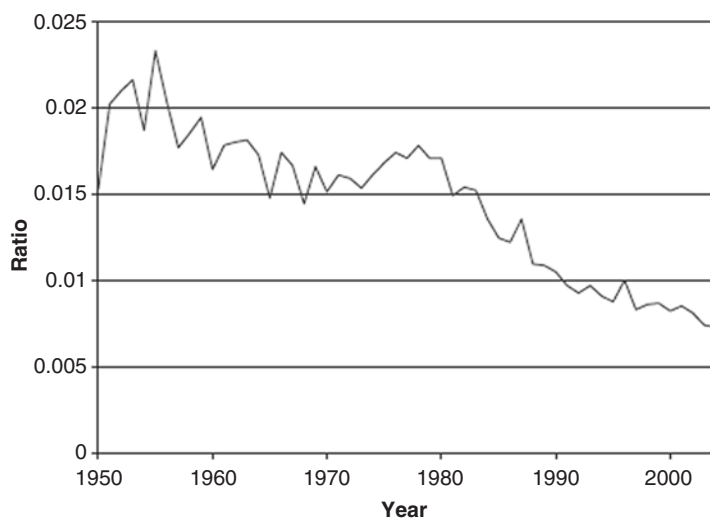


Fig. 9.2 Ratio of DJNs to total number of PhDs (All Fields), 1950–2004. Source: University Microfilms, University of Michigan at Ann Arbor

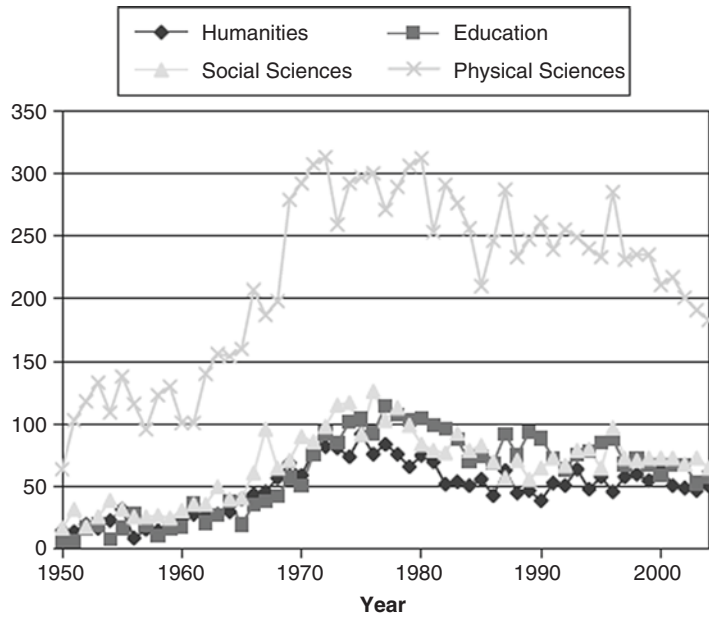


Fig. 9.3 Number of PhDs with DJN, by Field, 1950–2004. Source: University Microfilms, University of Michigan at Ann Arbor

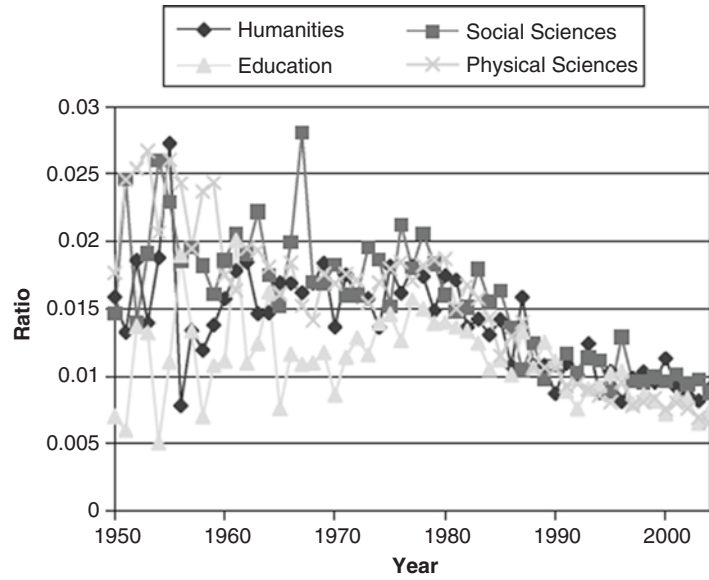


Fig. 9.4 Ratio of DJNs to total number of PhDs, by Field, 1950–2004. Source: University Microfilms, University of Michigan at Ann Arbor

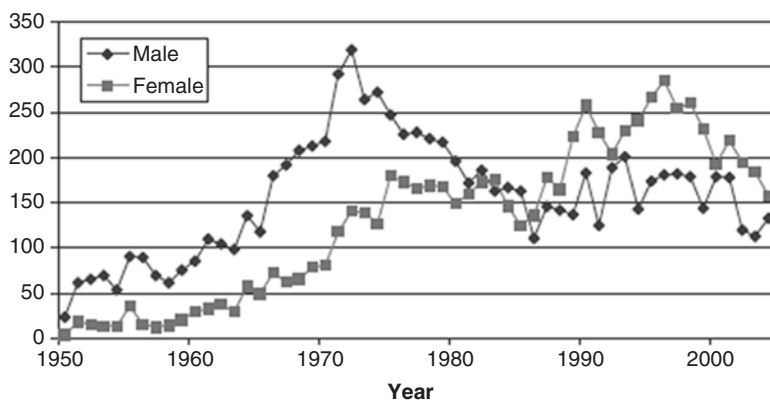


Fig. 9.5 Number of PhDs received by DJNs in all Fields, by Gender, 1950–2004. Source: University Microfilms, University of Michigan at Ann Arbor

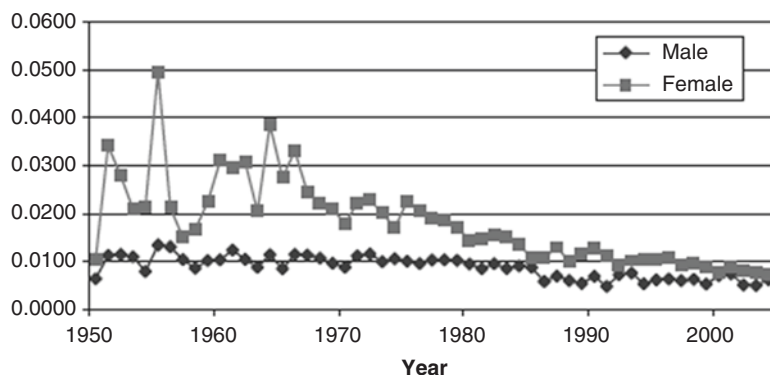


Fig. 9.6 Ratio of DJNs to total number of PhDs in all Fields, by Gender, 1950–2004. Source: University Microfilms, University of Michigan at Ann Arbor

physical sciences, the social sciences, education and the humanities. In Figs. 9.5 and 9.6 the data on DJN PhDs and the ratios are shown separately by gender.

Across all fields, the number of DJN PhDs increased from an average of under 200 a year to a peak of about 525 per year in the 1970s, with a rapid decline to under 400 a year in the first years of the twenty-first century (Fig. 9.1). As a proportion of all PhDs, however, the decade of the 1950s was the high point, with about 2% of all PhDs received by the DJNs, with the proportion declining in the 1960s, showing a bit of an increase in the late 1970s, and continuous declines thereafter to less than 1% since the late 1980s (Fig. 9.2). Undoubtedly, some of the decline in the ratio in the past two decades has been due to the increase in the number of foreign doctoral candidates. Unfortunately, the University Microfilms data do not record the PhD recipient's country of birth, visa status or citizenship.

The patterns do differ somewhat across fields of study. Among the physical sciences there is a sharp increase in DJN PhD degrees during the 1960s, from just over 100 per year in the early 1950s to a peak of 313 in 1972 (Fig. 9.3). The level was maintained in the 1970s, with a decline in the 1980s and early 1990s to about 250 per year, and a sharper decline since the late 1990s (only 183 in 2004).

The ratio of DJN to all PhDs in the physical sciences shows a nearly continuous decline throughout the post-war period from nearly 2.5% in the 1950s to about 0.8% since 2000 (Fig. 9.4). The sharp increase in science PhD production among both Jews and non-Jews is likely to be reflecting the increase in public funding for science education following the USSR's launching of Sputnik in 1957. The increased funding provided more support for PhD students in the sciences and increased the demand for science faculty in colleges and universities.

A somewhat different pattern is found in the social sciences, where there was a sharp rise in DJN PhD awards from about 30 a year in the 1950s to about 115 per year in the 1970s, after which there was a decline until the nadir in the late 1980s (only 57 in 1987), with some modest recovery since then (Fig. 9.3). The ratio of DJNs to all PhDs, however, was fairly steady from 1950 through the 1970s (1.5–2.1%), with a decline in the 1980s to about 1.0% in 1990, and it has held at that level since then (Fig. 9.4).

The number of DJN and non-Jewish PhDs in education is much smaller than in the physical or social sciences and as a result the annual volatility is greater. The data show a spike in DJN PhDs in the middle and late 1970s (Fig. 9.3). The ratio also showed a peak in this period of about 1.4%, with the earlier and later periods of about or below 1% (Fig. 9.4).

In the humanities as well, there was a sharp increase in DJN PhDs received during the 1960s, a level number of over 80 per year in the middle 1970s (which was also the peak for the ratio) and a decline thereafter (Figs. 9.3 and 9.4).

Although there are differences across the four major disciplines, a general pattern is an increase in the number of DJNs receiving the PhD degree up to a plateau in the 1970s, and a decline thereafter. As to the ratio of DJN to all PhDs awarded, there appears to have been an initial increase followed by a trend toward a decline in later decades, both overall and within specific disciplines.

There are dramatic differences in the pattern of the receipt of PhDs by gender (Fig. 9.5). The receipt of PhDs by male DJNs increased more rapidly than among female DJNs from 1950 to the early 1970s.¹⁰ The number of PhDs received by male DJNs then declined sharply, reaching a low point in the late 1980s, rebounded somewhat in the 1990s, and declined in the 2001–2004 period.

The number of women DJNs receiving a PhD increased until the early 1980s, declined in the mid-1980s, rebounded until a peak in the late 1990s, and has declined since then (Fig. 9.5). Note, however, that since the late 1980s more PhDs have been received by female than by male DJNs, with the gap being greatest in the middle 1990s.

¹⁰For an historical account of discrimination against Jewish women in college and university teaching see Freidenreich (2007).

The ratio of DJNs to all PhDs separately by gender, is shown in Fig. 9.6. There is a modest decline in the ratio throughout the post-war period for men, although the ratio is erratic in the 1950s and early 1960s. The ratio is higher for women, more erratic in the 1950s and 1960s and then declines.

The Production of PhD Graduates: The Model

The number of PhDs produced in a year will be a function of the demand for and the supply of PhD education. The higher the demand for and the greater the supply of PhD training opportunities, the greater will be the number of graduates. Because there is no direct measure of the price of PhD training, it is not possible to estimate the separate supply and demand equations. What can be estimated, however, is a reduced form equation where the number of PhD graduates in a year (or the ratio of Jewish to all graduates) is regressed on a series of explanatory variables that are hypothesized to shift the supply and/or demand equations.

The demand for PhD education, of course, would be influenced by the earnings of PhD graduates. The salaries of assistant professors or academic salaries in general can serve as a proxy for general academic labor market conditions after graduation. I have not yet uncovered an appropriate time series for these data, so it is not included in the analysis.

A proxy variable for the probability of employment if one were not a doctoral student and for general labor market conditions can be entered into the analysis. The adult male unemployment rate can be used for this purpose. This variable is not included in the regressions reported below because preliminary estimations indicate that it was not statistically significant and its inclusion had no effect on the other explanatory variables. This is perhaps not surprising. Business cycles in the post-WWII period have been relatively mild and of short duration overall, and even more so for college graduates, the pool from which PhD candidates would be drawn.

Data are not available on tuition and fee charges net of fellowships and scholarships. An important source of support for doctoral education, especially in the physical and to a lesser extent the social sciences, is research funding for the student directly or indirectly through their advisors from research grants and contracts. The US government research and development grants (R&D) are an important source of this funding. The greater the R&D funding levels, lagged by 5 years and adjusted for inflation, the greater would be the expected awarding of PhD degrees, especially in the sciences. The 5 year lag is intended to account for the time between starting and completing a PhD. The funding data are available back to the early 1950s.

An important factor influencing the decision for young males to continue their schooling beyond the Bachelor's level in the post-war period was whether this would affect the likelihood of their being drafted into the US Armed Forces. This, of course, is influenced by the number of draftees and deferment policy. Also, the effect of the draft, or the cost of being drafted, would depend on whether this would occur in peacetime or during a war. Three variables to capture these effects are

included in the analysis: the number of conscripts inducted into the US Armed Forces (in thousands) five years prior to PhD completion and dichotomous variables for the Korean War (1950–1953) and the Vietnam War (1964–1975), both lagged five years. Again, five year lags are intended to account for the time between starting and completing a PhD degree.

Other demand variables are assumed to vary over time, as are the supply of PhD slots. Therefore time-trend variables (time and time squared) are also included in the estimating equations.

Regression Analysis

A multiple regression analysis can be used to study in a more systematic manner the trends over time in the number of DJN PhD degrees awarded and in the ratio of DJN to all PhD degrees. The dependent variables in this analysis are the number of DJN and ratio of DJN to all PhD degrees awarded each year from 1950 to 2004. The explanatory variables include a time trend (Time) and its square (Time Squared). During various years in the period under study military conscription and the Korean and Vietnam Wars may have influenced the decision of young men to continue their schooling through to the PhD to avoid the draft. The draft/war variables are included in the analysis, but they are lagged 5 years under the assumption that doctoral education started because of the draft/wars would take 5 years to result in a completed PhD. R&D research and development funding, deflated by the consumer price index and expressed in millions of dollars, is also included in the analysis lagged 5 years. Dichotomous variables are added to the equation for three disciplines, the physical sciences, education, and the humanities, with the social sciences as the benchmark. The analyses are computed overall without regard to gender and separately for those identified as having male and female first names. The variables are explained in greater detail in the Statistical Appendix.

Table 9.1 reports the regression equation for the number of DJN PhDs awarded from 1950 to 2004 for the data for all four disciplines, that is, four observations per year for 55 years for a total of 220 observations.¹¹ Column (1) is for all DJNs, while columns (2) and (3) are for males and females, respectively. The analysis indicates that there was no effect on DJN PhD production of the Korean War (perhaps because it was both unanticipated and relatively short) or conscription into the US Armed Forces, once the Vietnam War variable is held constant statistically. The Vietnam War had a highly statistically significant effect on male but not female DJN PhDs. R&D funding has a highly statistically significant effect on male DJN PhD production, but although the coefficient is positive it is much smaller and not quite at the margin of being statistically significant for females.

¹¹ The Durbin–Watson statistic in Tables 9.1 and 9.2 indicates that there is no statistically significant autocorrelation in the residuals in the level and ratio equations.

Table 9.1 Regression analysis of PhDs awarded to DJNs, 1950–2004, by Gender

Variable	All DJN	Male DJN	Female DJN
Time	0.097 (0.36)	−0.53193 (−4.92)	0.944483 (5.41)
Induction	−0.038 (−2.88)	−0.00832 (−1.57)	−0.00594 (−0.69)
Vietnam war	40.552 (7.13)	13.63952 (5.97)	3.371917 (0.91)
Korean war	7.517 (0.93)	4.482007 (1.38)	2.088929 (0.40)
Funding R&D	0.0014 (4.92)	1.11E−06 (9.76)	0.000292 (1.59)
Humanities	−17.855 (−3.75)	−6.07273 (−3.17)	7.672727 (2.48)
Physical science	147.963 (31.04)	18.34545 (9.57)	24.01818 (7.76)
Education	−6.127 (−1.29)	−8.14546 (−4.25)	1.309091 (0.42)
Intercept	12.971 (2.05)	16.41903 (6.47)	−15.6059 (−3.81)
Sample size	220	220	220
Adj <i>R</i> ²	0.90	0.76	0.64
Durbin–Watson statistic	1.87	1.90	2.07

Note: *t*-ratios in parentheses
Sources: See Statistical appendix

The discipline coefficients indicate that both male and female DJNs received more PhDs in the physical sciences than in the social sciences (the benchmark), and fewer PhDs in the humanities. Compared to the social sciences, however, fewer PhDs are received by male DJNs in education, and although more are received by women, the difference between the number of female DJN PhDs in education and the social sciences is not statistically significant.

When only a linear time trend (Time) is considered it shows a statistically significant decline in male DJN PhDs awarded over the course of the 55 years, but among females there is a significant increase over time. A quadratic time trend is also used (Time, Time Squared).¹² The male DJN PhD production increased in the early years and then declined, other variables the same. The peak for men occurred at time equal to about 18 years or 1967 (recall 1950 is time period 1). Among women, however, the linear term is positive and significant, while the squared term is negative but not statistically significant. The coefficients imply that female DJN production increased throughout the period under study, although with weak evidence for a decline over time in the annual increase.

Table 9.2 reports the regression equations for the ratio of DJN to all PhDs awarded as the dependent variable, overall and separately by gender. Overall, the

¹² Partial effects of the quadratic time-trend variables, other variables the same, for DJNs receiving the PhD:

	All	Male	Female
Time	4.135 (4.71)	0.239 (0.65)	1.434 (2.39)
Time squared	−0.051 (−4.81)	−0.009 (−2.19)	−0.006 (−0.85)

t-ratios in parentheses

Table 9.2 Regression analysis of ratio of DJNs to all PhDs awarded 1950–2004, by Gender

Variable	All DJN	Male DJN	Female DJN
Time	−0.00021 (−6.67)	−0.00017 (−5.08)	−0.00065 (−3.64)
Induction	−7.3E−06 (−4.73)	−5.66E−06 (−3.41)	−2.5E−05 (−2.89)
Vietnam war	0.0028 (4.34)	0.001352 (1.89)	0.000389 (0.1)
Korean war	0.0021 (2.25)	0.002447 (2.4)	0.007886 (1.47)
Funding R&D	1.20E−08 (−0.37)	6.04E−11 (1.7)	8.60E−08 (0.46)
Humanities	−0.0018 (−3.29)	−0.00238 (−3.97)	0.021624 (6.84)
Physical science	−0.00038 (−0.69)	−0.00721 (−12.02)	−0.00025 (−0.08)
Education	−0.0046 (−8.37)	−0.0059 (−9.84)	−0.00564 (−1.78)
Intercept	0.022 (31.09)	0.017612 (22.18)	0.034826 (8.32)
Sample size	220	220	220
Adj R2	0.63	0.54	0.37
Durbin–Watson statistic	2.27	1.87	2.44

Note: *t*-ratios in parentheses

Sources: See Statistical appendix

induction variable has a significant negative coefficient, while the two war variables had significant positive coefficients. The interpretation is that the DJNs responded by entering PhD programs more so than others in the two war periods, but outside of wartime the DJNs were less likely than others to seek the PhD in response to the draft. Male DJNs were more responsive to R&D funding than were others.

Compared to others, DJN men who received a PhD were more likely to get their PhDs in the social sciences than in other disciplines. For women, relatively more of the DJNs were in the sciences (social or physical) than in the humanities or education.

The statistically significant linear time trend indicates that across the entire period there was a decline in the proportion of PhDs received by male and by female DJNs. When the quadratic time variables are considered, the squared term is statistically significant with a negative sign for both genders pooled, but the time coefficients are not statistically significant when the equations are computed separately by gender.¹³ The quadratic specification is also consistent with a general decline over the post-war period in the ratio of DJN to all PhDs produced.

¹³ Partial effect of the quadratic time-trend variables, other variables being the same, for the *ratio* of DJN to all PhDs:

	All	Male	Female
Time	0.000067 (0.63)	−0.0000084 (−0.07)	−0.000093 (−1.52)
Time squared	−0.0000035 (−2.72)	−0.0000021 (−1.47)	0.0000036 (0.48)

t-ratios in parentheses

Summary and Conclusions

This chapter is motivated by the apparent decline in American Jews working as college and university teachers in recent decades, while at the same time the number and proportion of Jews in other professional occupations has increased. It is hypothesized that discrimination against Jews in salaried professional occupations in the pre-WWII period discouraged their entry, but post-WWII this discrimination decreased, and that the decline occurred earliest in college and university teaching jobs (encouraging Jewish entry), and later in other sectors. As employment in other sectors for Jews with advanced degrees become available, the relative attractiveness of college and university teaching, and hence of the PhD degree, declined.

Since the PhD has become required for most college and university teaching positions, although not all PhDs enter this occupation, the focus in this lecture is on the receipt of the PhD as an index of entry into the occupation. The data on PhD awards by year and major discipline, as recorded in University Microfilms, University of Michigan, are studied. Jews are identified through the DJN technique (36 names), which undoubtedly provides an undercount of Jewish PhDs.

The descriptive statistics reported in the graphs suggest an increase in the number of PhDs received by those with a distinctive Jewish name from 1950 up to the early 1970s, a plateau in the 1970s, with a decline thereafter. The data on the ratio show an increase from 1950 to the middle 1950s, after which the proportion of PhDs received by Jews declined. This general pattern appears, as well, among the four major disciplines, social sciences, physical sciences, humanities and education.

Multiple regression analysis is used to analyze these trends. More so than for non-Jews, male Jewish PhDs increased in response to war (more so for the Vietnam War than the Korean War), but was less responsive to variations in peacetime conscription into the Armed Forces. Women PhD production showed very little, if any, responsiveness to the war and conscription variables. Jewish men appear to have responded more sharply to increases in Federal R&D funding than did others. Other variables the same, the overall pattern appears to be an increase in the number of Jewish men receiving the PhD, from the early post-WWII period to about 1967, after which it declined. As a proportion of all male PhDs, the decline started in the 1950s and continued thereafter. Jewish women experienced an increase in the number of PhDs throughout the post-war period. Their share among female PhDs increased until about 1979, after which it too declined.

These time-trend patterns are consistent with the hypothesis that the rise and decline of American Jews in the receipt of the PhD and in college and university teaching was in response to changing patterns of discrimination against Jews in salaried professional occupations.

The membership of the ASSJ is not immune to these developments. Note the decline in the number of DJN PhDs in the social sciences from the peak in the late 1970s from about 110 per year to about 70 per year by the early 2000s, a decline of about one-third. Note also the steady decline in the ratio of DJNs to all PhDs in the social sciences. With a smaller absolute size of the pool to draw upon, a decline in

the number of young ASSJ members is to be expected. Yet, the decline in the number of young members seems greater than what can be explained by the trends reported here. Perhaps the greater acceptance of Jews and the study of Jews and Judaism in the mainstream of the social sciences has expanded the opportunities for publication in mainstream journals and presentations at mainstream conferences. If so, it may be that the very success of ASSJ in bringing the study of Jews and Judaism into the mainstream may be responsible for the decline over time in young members.

Statistical Appendix: Source of Data and Definitions of Variables

Data Source on PhDs: The data on PhDs awarded annually (1950–2004) in the US are from dissertations abstracted in University Microfilms, University of Michigan at Ann Arbor (Web address: <http://wwwlib.umi.com/dissertations/>). Data are by discipline (education, humanities, social science, physical science, and all).

DJN: Jews are identified as individuals having a surname or a middle name that is on a list of 36 DJNs reported in Sheskin (1998). These names are Berman, Caplan, Cohen, Epstein, Feldman, Freedman, Friedman, Goldberg, Goldman, Goldstein, Goodman, Greenberg, Gross, Grossman, Jacobs, Jaffe, Kahn, Kaplan, Katz, Kohn, Levin, Levine, Levinson, Levy, Lieberman, Rosen, Rosenberg, Rosenthal, Rubin, Schwartz, Shapiro, Siegel, Silverman, Stern, Weinstein, and Weiss.

Gender: Identified from a list of the 300 most frequently used males names and the 300 most frequently used females names for individuals born in the US, 1960–1969, from the Social Security Administration (web address: <http://www.ssa.gov/OACT/babynames/>). The 300 most frequently used males names constitute 88% of all males born in the US in this period and for females it was 78%. If a name appears on the list for both genders all persons with that name were assigned the higher ranked gender (e.g., as Leslie had a higher rank among females, all Leslie's in the PhD data were assumed to be female.) For individuals with names not on either list, gender is coded as unknown.

Ratio: Dependent variable equal to the ratio of DJN to all PhDs awarded by year, separately by discipline and overall.

Induction: The number of people, in thousands, conscripted into the military 5 years previously. Data taken from the US Selective Service (Web address: <http://www.sss.gov/induct.htm>).

Vietnam War: A dichotomous variable that equals one if the Vietnam War (1964–1975) was in progress five years previously, and zero if it was not in progress.

Korean War: A dichotomous variable that equals one if the Korean War (1950–1953) was in progress five years previously, and zero if it was not in progress.

Research and Development Funding: All federal funds given 5 years previously to research and development in millions of dollars. Values are deflated by CPI with a base year of 1982, taken from the Bureau of Labor Statistics (web address: <ftp://>

ftp.bls.gov/pub/special.requests/cpi/cpiiai.txt). Data before 1951 have been assigned the value for 1951. Data on funds are taken from the NSF Survey of Federal Funds for Research and Development (web address: http://www.nsf.gov/statistics/shows-rvy.cfm?srvy_CatID=4&srvy_Seri=10).

Time: Starting as 1950 = 1, increases by one for each successive year.

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Chapter 10

The Economics of the Diaspora Revisited



Eliezer B. Ayal and Barry R. Chiswick

In an article in “Economic Development and Cultural Change,” Reuven Brenner and Nicholas Kiefer raised the issue of the effect of the refugee status of an ethnic group on the levels and types of investments made by members of the group (Brenner and Kiefer 1981). Their hypothesis is that refugees will overinvest in human capital and underinvest in physical capital. They repeat the often heard point that Jews in the Diaspora invest more in human capital than others because of a lingering fear of expropriation and expulsion, a fear well-grounded in the historical experience of the past 2000 years. Brenner and Kiefer then consider the general nature of their hypothesis by examining data for Palestinian Arabs. The data show higher levels of schooling and occupational status for U.S. Jews compared with non-Jews and for Palestinian refugees compared with most other Arab groups in the Middle East. We do not dispute these patterns. What is at issue, however, is the interpretation or explanation of these patterns.

We have three objections to the Brenner-Kiefer article. First, it is ambiguous whether a refugee experience will result in greater investments in human capital than otherwise or greater investments than residents of the host country, *ceteris paribus*. Second, an examination of data on the earnings of Jews in the United States does not provide support for the hypothesis that Jews overinvest in human capital. The earnings analysis finds that Jews have a higher rate of return on human capital than non-Jews. Third, the higher level of schooling among Palestinians in the Arab Middle East is consistent with the fact that the first refugees from the 1948 war were disproportionately from the

Revision of original article published in *Economic Development and Cultural Change*, 31(4), July 1983, pp. 861–875. Co-authored with Eliezer B. Ayal. I am responsible for the current version. We would like to express our thanks to the Shiloah Institute, Tel-Aviv University, and its director, Professor Rabinovitz, for allowing access to their files.

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B. R. Chiswick (ed.), *Jews at Work*, Studies of Jews in Society 2,
https://doi.org/10.1007/978-3-030-41243-2_10

urban middle and upper classes in Palestine; that prior to 1948 Palestinian Arabs had higher levels of education than Arabs in neighboring countries except Lebanon; that changing attitudes toward the role of women led to a vast increase in female education; and that the United Nations Relief and Work Agency (UNRWA) provided Palestinian refugees with educational facilities superior to those available to others in the area. Hence, we would expect the Palestinian refugees to have a higher level of education and occupational status than the general population of the Arab countries. Moreover, the data cast doubt on the allegations that the fields of study chosen by Palestinian Arabs are significantly different from the general pattern in the area. The Brenner-Kiefer analysis does not demonstrate that the refugee status *per se* determined the human capital investment decisions of Palestinian Arab refugees.

Brenner and Kiefer do not define what they mean by “diaspora,” and, except for the title, the term is used only once in their paper (Brenner and Kiefer 1981, p. 532). They imply that it refers to any group currently or previously fearful of discrimination and confiscation of property. Traditionally the term has been used in reference to the dispersion and persecution of Jews living in alien environments among people of different ethnic, religious, and cultural backgrounds. Using the broader definition implied in Brenner and Kiefer, gypsies in Europe and American Indians and blacks in the United States would also appear to be appropriate candidates for testing their hypothesis, but these groups appear to make smaller investments in human capital. In addition, unlike these other groups, the Palestinian refugee experience has been limited, by and large, to residence in host countries whose populations are similar to theirs in ethnic origin, religion, language, and culture.

Discrimination and Investments

As Brenner and Kiefer note in their model, a population that fears further dislocations acts as if there is a nonzero probability that a “tax” will be placed on certain of its assets. However, the specific nature of the response should depend on the nature of the perceived danger. If property expropriation is feared, then readily expropriable forms of physical capital ownership are expected to be less profitable. Investments in diamonds and gold are to be preferred to investments in land. If expulsion is feared, then country-specific human capital investments, such as law, have a lower expected return than human capital investments that are more readily transferable internationally, such as medicine. If the terror of random murder is of concern, physical capital investments may be more attractive for a family, that is, less risky than investments in human capital. It is therefore not obvious that investments in human capital *per se* are to be preferred.¹ The German Jewish lawyer of the

¹Each of the types of persecutions described in the paragraph also implies an additional form of substitution away from future consumption, which is less certain, and toward current consumption. After having acquired enough transferable assets (human or physical) to assure one's escape, one would expect that a population fearful of expulsion will have a lower saving rate and less total investment in human and nonhuman capital than others.

1930s had less readily transferable assets than the German Jewish industrialist or stockholder.²

The Brenner-Kiefer analysis is deficient in not giving sufficient attention to the distinction between “portable” assets and “liquid/ transferable” assets beyond mentioning that their theoretical model could handle such a distinction (Brenner and Kiefer 1981). Because human capital investments are embodied in the person, they are portable. But only some human capital investments are highly transferable in the sense that they are virtually equally productive in possible countries of destination. Other human capital investments have little transferability. Even if assets are not portable, they may be attractive to a population fearful of expulsion if the assets can be liquidated or converted into transferable assets. The greater the liquidity of a non-portable asset (e.g., real estate), the more attractive it would be to such a population. Viewed in this light, it is not obvious that a population fearful of further geographic dislocations will overinvest in human capital and underinvest in physical capital. Rather, such a population will overinvest in liquid/transferable assets and underinvest in illiquid and nontransferable assets.

As we suggest in the next section, the greater investment in schooling by Jews may reflect, not a substitution away from more vulnerable assets, but a greater ability to translate schooling into earnings. This characteristic of Jews is presumably influenced by their culture, and past persecution may have, in some subtle way, played a role in shaping this culture. However, it does not appear to be reflecting the mechanism in the Brenner-Kiefer hypothesis.³

Investments in Human Capital by Jews

The Brenner-Kiefer hypothesis for explaining the higher level of investment in human capital by Jews can be tested empirically. Because of a fear of expropriation of physical assets, Jews would have a lower expected rate of return on physical assets and hence a greater supply of funds for investment in human capital. The obvious implication is that Jews will make more investments in human capital. If Jews and nonJews have the same marginal rate of return schedule for human capital, the greater investments by Jews mean that Jews will have lower average and marginal (money) rates of return from investments in human capital.⁴

² Refugees have far more difficulty than other immigrants in transferring their pre-migration skills to their country of destination. See Chiswick (1978).

³ In addition, although gypsies underwent experiences similar to Jews in many European countries, it is believed (we know of no data on this) they have not made large investments in human capital as have Jews. Another implication of the Brenner-Kiefer model is that as a consequence of lower total investments and greater investments in human capital Jews have invested less than others in physical capital and financial assets. It is not obvious that this has happened. (See, this volume, Chap. 16.)

⁴ A similar implication arises if Jews invest more in human capital because of a greater “taste” or “preference” for this activity. Because of a greater nonpecuniary return from, say, schooling, they would invest in more years of schooling and have a lower pecuniary rate of return.

Consider an alternative hypothesis. Suppose Jews have a higher demand curve (i.e., marginal rate of return schedule) from investment in human capital. This could arise if they are more efficient in acquiring human capital, that is, if they learn more in school. Alternatively, it may arise if they are more efficient in applying human capital in the labor market. If Jews have the same supply of funds for investment in human capital as non-Jews but a higher demand (marginal rate of return) schedule, they would make greater investments in human capital. In addition, as long as the supply schedule of funds is upward rising, at equilibrium Jews would have a higher marginal and average rate of return on human capital than non-Jews.

There are, therefore, two hypotheses that predict greater investments by Jews in human capital, but the supply of investment funds hypothesis ("human capital is less vulnerable") predicts a lower rate of return, while the demand for investment funds hypothesis ("productivity" or "ability") predicts a higher rate of return from human capital. The two hypotheses are not mutually inconsistent, but data on rates of return will indicate which is the stronger hypothesis.

Perhaps the largest random sample for the United States with data on religion is the March 1957 Current Population Survey, apparently the only U.S. Bureau of the Census survey that includes data on income, schooling, and religion (U.S. Bureau of the Census 1958). The survey consisted of 35,000 households, of which 1100 were Jewish. Brenner and Kiefer (1981) refer to the census bureau report on the survey to demonstrate the higher level of schooling and occupational status of Jews. Tables released after the original report provide a cross-classification of median income by schooling and religion (see Table 10.1). The data for urban men indicate that among Jews and others (white Protestants and Roman Catholics) with 7 or fewer years of schooling the Jews have slightly lower incomes. Among those with 8 years of schooling, among high school graduates and those with higher levels of

Table 10.1 Median years of schooling completed and median income in 1956 of urban men by religion (March 1957)

	Jewish	White Protestant	Roman Catholic
Median years of schooling completed	12.7	11.7	11.7
		Median Income (\$)	
Years of schooling completed:			
0–7	2609	2812	2819
8	3844	3712	3729
9–11	4672	4850	4170
12	4913	4684	4567
13–15	5026	4712	4361
16+	8041	6375	5727

Source: U.S. Bureau of the Census, "Tabulations of Data on the Social and Economic Characteristics of Major Religious Groups, March 1957," mimeographed (Washington, D.C.: Bureau of the Census, n.d.)

Note: The income data are for men age 14 and over while the schooling data are for men age 18 and over

schooling, the Jews have higher incomes. The ratio of Jewish to non-Jewish incomes appears to rise with the level of schooling. The implication is a higher rate of return from schooling for Jews.

A recent econometric analysis which used 1970 census data arrives at a similar conclusion (Chiswick 1983). This was an analysis of earnings for adult white men who were second-generation Americans (native born with one or both parents foreign born). Those who were raised in a home in which Yiddish, Hebrew, or Ladino (the language of Sephardic Jews) was spoken other than or in addition to English were classified as Jews. All other adult white men were classified as non-Jews. A human capital earnings function analysis was used to estimate the partial effects of years of schooling and years of labor market experience on the earnings of Jews and non-Jews, holding constant other demographic characteristics, including marital status and area of residence.

Years of schooling and years of labor market experience were found to have significantly larger positive effects on the earnings of Jews. Other things being the same, an extra year of schooling raises the earnings of Jews by 8.2% and of non-Jews by 6.8%. When the nonlinear effect of labor market experience on earnings is evaluated at 10 years of experience, an extra year of experience raises the earnings of Jews by 2.6% but of non-Jews by only 1.9%. In the data under study, nearly half of the Jews live in urban parts of the Standard Metropolitan Statistical Areas of New York, New Jersey, and Connecticut. When the sample is limited to persons living in these areas, religious differences in the effect of schooling and experience on earnings narrow but remain statistically significant. The effect of an extra year of schooling on earnings is 7.8% for Jews and 6.7% for non-Jews. Evaluated at 10 years of experience, an extra year of experience raises the earnings of Jews by 2.0% compared with 1.1% for non-Jews.

The larger coefficient of schooling of Jews implies a higher rate of return from schooling. The steeper experience-earnings profile implies a higher rate of return to on-the-job training and/or greater investments in such training.

The Palestinian Arabs

Brenner and Kiefer are under severe handicaps in the Palestinian Arab section of their paper, some of which are self-imposed. The statistical data are old, incomplete, and often inconsistent with other sources. In their effort to support their hypothesis that Palestinian Arabs demonstrate “diaspora” symptoms, Brenner and Kiefer make several assertions. (1) During the British Mandate the Palestinian Arabs were “fairly homogeneous with the Arab populations in the neighboring countries” with regard to educational and occupational structure (Brenner and Kiefer, p. 518). (2) After 1948 there was a very large increase in educational attainment among Palestinian Arabs and a change in occupational choices which sets them apart from other Arabs. (3) These changes are attributed to the special situation of the Palestinian Arabs, that is, their “diaspora” status. We will show that their claims regarding Palestinian Arabs stand on unsolid ground.

Education During the British Mandate

Throughout the British Mandate in Palestine there was a strong and persistent upward trend in education among the Arabs, in spite of disruptions like the civil disorders between 1936 and 1939. By the early 1930s the literacy rate was higher among Palestinians than among the Moslems elsewhere in the British Empire and British Protectorates, including Egypt (Nemirovsky 1934 and 1976).

In the 1940s the drive for education was especially vigorous among the Palestinians Arabs. Both the number of students and their proportion in the population rose steadily. During World War II the Palestinian Arabs had the highest elementary school enrollment rate among the Arab countries with the exception of Lebanon (see Table 10.2).⁵ A number of contemporary sources noted that the demand for education far outpaced the available schoolrooms. For example, of the 8716 new applicants in towns to government schools in 1944, only 4721 (54%) were accepted. In the villages, 13,789 applied and only 9574 (67%) were accepted (Shimoni 1947).

The Brenner and Kiefer claim (1981, p. 527) that there was no progress in the “frequency of students” among Palestinian Arabs under the Mandate is refuted by the data in their Table 5. The table indicates that students increased as a proportion of the population from 7.3% in 1934 to 9.3% in 1940, a 27% increase in 6 very turbulent years. During the following 3 war years the reported student percentage hovered around 9%. Brenner and Kiefer also report (their Table 5) 9% for 1947. Their source, however, is listed as the *Statistical Abstract of Palestine 1944–45*

Table 10.2 Elementary school enrollment in Arab countries, 1942–45

Country	No. of Students (Thousands)	Enrollment Rate ^a (%)
Iraq	135	20
Transjordan	14	28
Syria	148	39
Egypt	1360	47
Arab Palestine	107	52
Lebanon	120	73

Source: George T. Reuner, “Arab Education in the Near East,” *Middle Eastern Affairs* 1, nos. 8–9 (August–September 1950): 222. Original source, Roderic D. Mathews and Matta Akrawi, *Education in Arab Countries of the Middle East* (Washington, D.C.: American Council on Education, 1949)

^aEnrollment rate is the proportion of school age youths enrolled in school

⁵The high percentage in Lebanon is ascribed to “the long history of foreign and native Christian schools. In Arab Palestine it seems to stem from Jewish influence and example” (Reuner 1950). The original source of the data is Mathews and Akrawi (1949).

which cannot provide data for 1947. Official contemporary sources, however, indicate an 11% rather than a 9% rate in 1947.

According to official Jordanian sources (cited by Badran (1980)) the number of Arab students in Palestine in 1946/7 was 135,000. The *Survey of Palestine* (vol. 3, sec. 1), prepared by the Mandatory government in 1947 for the use of the UN Special Committee on Palestine, reports that the population in 1946 consisted of 1,076,783 Moslems, 608,225 Jews, 145,063 Christians, and 15,488 others, for a total population of 1,845,559 (UN Special Committee on Palestine 1947). The number for all Arabs (namely, Moslems and Christian Arabs) was given as 1,203,000. Dividing the 1946–47 Arab students by the 1,203,000 Moslem and Christian Arabs results in an 11.2% enrollment ratio, which is close to the 11.7% reported by Badran. This was the highest rate among all Arab countries except Lebanon.

Thus, it is apparent that the substantial interest in education among Palestinian Arabs and the greater proportion with schooling when compared with other Arabs predated 1948.

Education After 1948

Those who became refugees in 1948–49 experienced dramatic changes in their opportunities for obtaining schooling. The most important were the establishment of the educational facilities of the UN Relief and Work Agency (UNRWA), the decline of the opportunity costs of education with the decline in employment opportunities for those who remained in the refugee camps, and the financial support provided by UNRWA. These factors would create an incentive for expanding education in any population, refugee or otherwise. UNRWA provided schooling without tuition charges and provided guidance and professional services not available in a typical Arab village.⁶ “Free and compulsory education” is theoretically available in most Third World countries, including Arab countries, but this does not result in actual widespread education because of budgetary constraints, in particular, scarcity of teachers and of places in schools. The Palestinian Arab refugees had no such scarcity of schools.

Some writers ascribe the strong Palestinian Arab inclination toward education to what they learned from the experience of the Jews in Palestine. These writers attribute the Jewish successes to their higher level of education and more modern technology. (See, e.g., Badran (1980) and Hallaj (1980).)

⁶Consider the following quotation: “Since the establishment of UNRWA, it has developed a network of health, social service, educational, and vocational training facilities which provide resources superior both quantitatively and qualitatively to those existing under the British Mandate in Palestine or to those in most host countries” (Peretz 1977, p. 65).

Another reason for the increase in schooling among the Palestinian Arabs was the increase in schooling among females.⁷ The increase in female education has been quite phenomenal, especially in the elementary level. For example, in 1975 there were over 101,000 girls compared with 119,000 boys in UNRWA's elementary schools, quite a change from the days of the Mandate (Peretz 1977). This is a consequence of factors other than the Brenner-Kiefer diaspora hypothesis. In addition, the increase in education was facilitated by the close proximity of the refugee camps and lodgings to urban centers with institutions of higher education.⁸

Occupational Choice

Brenner and Kiefer consider the subjects of study chosen by Palestinian Arab students. They hypothesize that the diaspora status of the Palestinian Arabs has resulted in their overinvesting in transferable skills, namely, medicine and engineering. The data they offer in support of this hypothesis are incomplete and are not consistent with other sources.

In their Table 8, Brenner and Kiefer report the very high proportion of Palestinians enrolled in medicine in St. Joseph's University, Lebanon, in 1961–62. St. Joseph's is an elite institution established (1874) by French Catholics mostly for Christians.⁹ In the absence of data on other aspects of the socioeconomic background of the Palestinians studying medicine at St. Joseph's University in 1961–62, one can only surmise that they were disproportionately children of the wealthy Palestinian Arabs who fled at the first sign of trouble in Palestine and settled very comfortably in urban Lebanon.¹⁰ The data for the American University at Beirut (1961–62) reported in the Brenner-Kiefer Table 8 indicated a slightly larger proportion of Palestinians than of Lebanese are enrolled in medicine (13% rather than 9%), but a slightly

⁷There were substantial sex differences in schooling and in literacy among Palestinian Arabs in the period of the Mandate. Among persons aged 7 and over in Palestine in 1931, the percent literate, by sex, is shown below.

	Males	Females
Moslems	25.1	3.3
Jews	93.4	78.7
Christians	71.5	44.7
Other	36.2	10.4
Total	42.8	22.1

Source: *Census of Palestine* (1931), 1:206.

⁸These points were made by a number of authors and recently by Hallaj (1980).

⁹As recently as 1973, 84% of the students were Christian. See Erlich (1981).

¹⁰For a discussion of the rapid success of this "upper and middle bourgeoisie," see Badran (1980).

smaller percentage are enrolled in either medicine or engineering (24% of the Palestinians and 28% of the Lebanese). Moreover, only 13% of the Jordanian/Palestinian university students (predominantly Palestinian) studied in Lebanon in 1960–61. Thus, the Palestinians studying in St. Joseph's University in 1961–62 were apparently not representative of the Palestinian student population that year (see Badran 1980, Table 10).

Brenner and Kiefer show (their Table 7) that in more recent years between 50% and 60% of Palestinian students sponsored by UNRWA were studying medicine. This may reflect a tendency for UNRWA to encourage medical education. Also, in the 1970s the entry requirements in Arab universities were substantially lower for medical schools compared to other areas of study in the Arab Middle East. The availability of places, especially in the natural and physical sciences, was apparently a major factor in the student's choice of field of study.¹¹

A study conducted by the Jordanian Directorate General of Statistics on Jordanian students (who are primarily Palestinians) pursuing higher education in 1969–70 provides data on fields of study. Their distribution by subject is shown in the unnumbered table below.¹²

Subject	% of Total No. of Students
Engineering	8.0
Medicine	10.0
Economics (including business)	23.5
Literature and arts	41.0
Natural Sciences	4.6
Other and not reported	12.9
Total	100.0

Thus, in spite of the UNRWA focus, medicine and engineering are not the fields of study of a large proportion of Palestinian students.

There is also evidence of high enrollment rates in medicine and engineering in Middle Eastern countries with barely any Palestinian refugees. Russell Stone used survey data to analyze the fields of study of university students in six Middle Eastern

¹¹ Consider the following quotations: "As a result of increased opportunities to join the faculties of medicine and engineering in the Arab countries, the number of those seeking to specialize in these subjects increased, including some students whose marks in the general secondary certificate or whose material circumstances did not permit their attending the classical universities" (Badran 1980, p. 71); "the admission policies [of Arab universities] are to a large extent based on the available space in the natural and physical sciences" (Abu-Lughod 1973, p. 110).

¹² See Badran, 1890, p. 72. Of those studying abroad (the vast majority), 50% are in various "branches of the arts," 25% in "economics, political science, business management and commerce," and the remainder in "medicine, engineering, the natural sciences and agriculture."

countries in the 1960s. He believes that the data “can be taken to indicate the anticipated occupational distribution of the university elite,” with the exception of Morocco where the faculty of medicine is apparently oversampled (see Stone 1973). The data indicate that for Tunisia, Turkey, Lebanon, and Iran 30%–40% of the students were studying medicine and pharmacy and engineering and science (Table 10.3).¹³ The proportion studying medicine and engineering would have been even higher in Tunisia, Morocco, and Pakistan were it not for the official policy in these three countries to channel a considerable number of students into the teaching professions. The preference for medicine and engineering has been attributed to their serving as effective channels for upward economic and social mobility.¹⁴

The proportion of students studying agricultural sciences is very small in the sample, which included agricultural faculties in Tunisia, Iran, and Turkey (Table 10.3). Stone notes that “one of the most difficult areas in which to motivate students is agricultural engineering and technology. The countries of the Middle East are based on peasant agriculture and agricultural pursuits tend to be spurned by students aspiring to upward social mobility, despite the necessity for agricultural extension workers, and engineers to work with irrigation projects, fertilizers, and the new high-yield grains.” (Stone 1973, p. 9–10). Thus, the loss of land suffered by some Palestinians is not the only explanation for the low demand for agricultural subjects. It appears that this is a pattern among Middle Eastern university students in general.

Table 10.3 University students’ course of study, by country (%)

Occupation	Morocco	Tunisia	Turkey	Lebanon	Iran	Pakistan	Total
Medicine, pharmacy	31.5	4.8	10.9	21.9	21.9	8.3	13.4
Engineering, science	17.7	23.2	30.8	20.7	15.3	7.5	21.1
Law, business, economics	4.0	24.4	24.0	23.9	26.4	21.1	22.9
Civil service, diplomatic	1.6	0.0	5.4	12.6	0.0	19.5	9.4
Teaching	45.2	44.5	20.9	20.7	30.2	42.0	29.3
Police, army	0.0	0.0	0.0	0.2	0.0	1.7	0.4
Agriculture	0.0	3.1	8.0	0.0	6.2	0.0	3.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Observations	124	483	1644	1126	242	1087	4706

Source: Russell A. Stone, “Anticipated Mobility to Elite Status among Middle Eastern University Students,” *International Review of History and Political Science* 10, no. 3 (November 1973): 11

Note: Detail may not add to total due to rounding

¹³The large proportion in “civil service” in Pakistan is attributed to the practice of requiring a university degree for civil service clerical jobs (Stone 1973).

¹⁴In commenting on the effect of the increase in wealth from switching to hashish production, the wife of a village elder in the Bekka Valley of Lebanon said: “If a man grows the hashish he can build a house, marry off his daughter, feed his family. Our sons can go to the university and become doctors and engineers” (Kifner 1981).

The data are consistent with the hypothesis that Palestinian Arabs are no different from their non-refugee counterparts in other Arab and Moslem countries in their fields of study and in using education as means for upward social mobility. There is no compelling evidence that they behave in a unique manner ascribable to a refugee or diaspora status.

Host Countries

Data published in articles in the *Journal of Palestine Studies* show that the vast majority of the Palestinian Arabs live in the area which constituted the British Mandate of Palestine. One estimate of the geographic distribution of the Palestinian Arabs in the early 1970s is shown in the unnumbered table below (Zahlan and Zahlan 1977).¹⁵ Thus, three-quarters of the Palestinians live in the area of the former British Mandate (Palestine and Jordan), and one out of 10 live in the “Greater Syria” area (Syria and Lebanon). Of those living outside of “Palestine,” 80% live in the “Greater Syria” area, among people barely distinguishable in ethnic origin, language, and religious denominations and with whom many had family ties.¹⁶

Area	%
“Palestine” (Israel and other areas west of the Jordan River)	45
Jordan	31
Lebanon	8
Syria	5
Other	11
Total	100

¹⁵ A similar distribution can be found in Abu-Lughod, p. 97.

¹⁶ The family ties are a consequence of the considerable movement of Moslems back and forth across the Palestinian border. Bachi indicates that Palestine was a net recipient of Moslems in the century prior to World War I, with other parts of the Ottoman Empire being the main sources. He also estimates that during the period 1923–46 the annual rate of immigration of Moslems into Palestine was 1.1 per thousand of the Moslem population. These immigrants were primarily from the neighboring countries – Syria, Lebanon, Jordan, and Egypt. Bachi attributes the Moslem immigration to the expanding employment opportunities in the agricultural and nonagricultural sectors of Palestine. He infers that “a considerable number of Palestinian Moslems married women from neighboring countries” from the disproportionate number of young women who immigrated. See Roberto Bachi (1974). For similar conclusions, see also Gottheil (1973). There was also net immigration of Arab Christians into Palestine from the surrounding countries, mostly from Lebanon and Syria, during these periods. See Ayal (1980). The annual rate of Moslem immigration into Palestine during the British Mandate was small in comparison with the large Jewish immigration. By international standards, however, it is a high rate of immigration. For example, it is 40% of the annual rate of legal immigration to the United States from 1975 to 1980, including Southeast Asian and Cuban refugees.

There is no compelling evidence that whatever discrimination might exist against Palestinians in the Arab host countries has retarded their occupational advancement. The major exception mentioned in the literature is the tendency to bar Palestinians, as well as other “out side” groups, from security-sensitive government positions. Indeed, the thrust of many recent articles by pro-PLO writers is that Palestinians are assimilating into the host countries too easily. They complain that the Palestinian Arab students adjust their choice of field of study to the market demand in Arab countries, which might not be the desired occupational structure if an independent Palestinian Arab state were to be established.¹⁷ There appears to be near unanimity among these authors that there is a strong demand for the skills of the Palestinian Arabs throughout the Middle East. Moreover, a number of writers mentioned that the host countries provide educational opportunities for Palestinian Arabs on equal footing with their own citizens.¹⁸

It appears, therefore, that the disabilities suffered by Palestinian Arabs are primarily connected with the tendency of some Arab countries to refuse to grant them full citizenship. This could interfere with their international travel, although it does not appear to have done so for those seeking employment since many authors comment on the mobility of the Palestinians as a characteristic desired by potential employers. Moreover, some Arab countries, such as Jordan, are quite willing to grant them citizenship.¹⁹ Rather than stay in countries that grant them citizenship upon graduation, many Palestinians go to countries that offer good job prospects rather than citizenship, such as Kuwait. Hallaj wrote: “The advanced level of education and skill thus acquired by the Palestinian people gave them access to residence, to fruitful employment, and to protective influence in many Arab and non-Arab countries” (1980, p. 78). In addition, some writers maintain that the economic status of the Palestinians is a function of their social class rather than their refugee status. For example, Rosemary Sayigh wrote: “The Palestinian bourgeoisie has profited along with other Arab bourgeoisies from oil-finance development. The Palestinian masses have shared with the Arab masses exclusion from wealth and power” (1978, p. 103).

¹⁷ For example, “higher education for the Palestinians has been geared to the fulfillment of individual needs and non-Palestinian requirements and job markets” (Hallaj 1980, p. 79).

¹⁸ Ibrahim Abu-Lughod mentions this in an article quoted in *Al Dustur*, Aman (March 31, 1980).

¹⁹ In a book about migration in the Arab world in the 1970s, Abu-Lughod states that Iraq “is encouraging other Arabs through offers of citizenship and other inducements” (Abu-Lughod 1978).

Conclusions

We share the Brenner-Kiefer belief that discrimination and fear of confiscation and expulsion will influence investment decisions, but the mechanism may be complex. Although their specific hypothesis may seem intuitively plausible, it does not withstand close examination of the circumstances of U.S. Jews and Palestinian Arabs.

The Brenner-Kiefer claim that the greater investment in education by Jews is explained by the fear of discrimination does not appear to provide sufficient explanation. Instead of the expected overinvestment in education, U.S. Jews may underinvest, if one is to judge by the rate of return from schooling and on-the-job training compared with white non-Jews in the United States. Nor does their model explain why many groups discriminated against in the United States have lower levels of education than the majority population.

Their hypothesis fails again when applied to the Palestinian Arabs, albeit for different reasons. Their data are incomplete and in sharp disagreement with other sources, which renders irrelevant the arguments based on the data they present. They presume to analyze people in an area undergoing a virtual economic, social, and cultural earthquake, independent of the Arab-Israeli conflict, without taking into account any of these changes. Specifically, the dramatic change in the attitude toward the education of Moslem women and the oil-rich countries' unquenchable demand for workers of all skill levels are completely ignored.

Contrary to the Brenner-Kiefer claims, we have shown that the level of education among Palestinian Arabs was high by regional standards and was rising before the 1947–48 war. The further increase in their educational level can be explained by the superior facilities and subsidies provided by UNRWA, their proximity to urban centers, the strong demand for skilled personnel in the Middle East, and changed attitudes toward the education of Moslem females. Similarly, the Brenner-Kiefer claim that the fields of study and the occupational structure of the Palestinian Arabs are fundamentally different from those of nonPalestinian Arabs is unfounded. Students in the Middle East who are not Palestinian also have a preference for studying medicine and engineering, and show little interest in agricultural sciences.

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Part III

Women and Children

The three chapters in Part III are on “Women and Children.” They view the family as a decision-making unit regarding the allocation of the family’s resources, including the optimal investment in their children’s human capital. This involves decisions regarding the number of children (“quantity”) and the parental investments made in each child (“quality”). This has important implications for the size and educational attainment of the next generation.

The three chapters use different methods for identifying Jews: a traditionally Jewish “mother tongue” when the respondent was a child, a direct question on religion, and a new method based on the respondent’s reported ancestry.

Chapter 11, “Labor Supply and Investment in Child Quality: A Study of Jewish and Non-Jewish Women,” focuses on the effects of women’s schooling and the presence and age of children on women’s labor supply. 1970 Census of Population data for second-generation Americans (women born in the US with at least one foreign-born parent) are studied. The Jewish identifier is whether the respondent reported that Yiddish or Hebrew was spoken in her home (other than or in addition to English) when she was a child.

This study shows a greater positive effect of education among Jewish women on their labor supply. It also shows an apparent “optimal” time pattern of investment in children. Jewish women are more likely to work, thereby accumulating assets, when there are either no children at home or when the children are “goods intensive” (e.g., paying for college tuition), and they are less likely to work when the children are “time intensive,” that is, when the children are under age 6 or are school-age. This too points to the greater sensitivity of Jewish parents to incentives for investing in their children’s human capital.

Chapter 12 is on “Differences in Education and Earnings across Racial and Ethnic Groups: Tastes, Discrimination, and Investments in Child Quality.” This chapter applies a “quantity/quality” tradeoff model for investment in children, viewing the country as comprising many racial and ethnic groups, including Jews. It

considers earnings, schooling level, and rates of return from schooling as indicators of child quality.

It shows that groups that have a lower fertility rate tend to invest more resources in each child (“higher quality”) and hence their children have both a higher rate of return from the schooling and higher levels of schooling. As a result of both more schooling and a higher rate of return, their children have higher earnings. Moreover, these patterns tend to persist from generation to generation. The implication for understanding the Jewish experience is that the lower Jewish fertility, and the greater mother’s time input in child care (labor supply patterns of Jewish women found in the previous chapter), among other child investment practices, contribute to Jewish children having a higher rate of return from their investments in schooling, and hence have a greater incentive to invest in more schooling.

Chapter 13, “A Method of Proxying a Respondent’s Religious Background: An Application to School Choice Decisions” (with Stella Koutroumanes Hofrenning), develops an alternative methodology for identifying a respondent’s religion in census and survey data. The National Opinion Research Center’s (NORC) General Social Survey (GSS) asks for the respondent’s ancestry and the religion in which the respondent was raised. By cross-tabulating religion by ancestry, a probability distribution of religion is generated for each of the ancestry groups. Six religion categories are identified in the GSS data under study (1972–1987): Protestant (61 percent of the adult population); Catholic (28 percent); Jewish (2 percent); None (7 percent); Other (2 percent); and, No Answer (0.3 percent).

The religion algorithm is applied in an analysis for the 1980 Census of whether the children in the family attend a private school or a public school (elementary or secondary school). Other variables the same, Jewish parents were as likely as Protestant parents and less likely than Catholic parents to send their school-age children to public schools.

Chapter 11

Labor Supply and Investment in Child Quality: A Study of Jewish and Non-Jewish Women



Barry R. Chiswick

Introduction

Of the racial and ethnic minorities in the United States, American Jews are among the most successful. Comprising about 2.5 percent of the population (in 1970) Jewish males have higher levels of schooling, occupational attainment and income than non-Jews. They have higher earnings even after one controls for earnings-enhancing advantages in schooling, labor market experience, occupational status, marital status and area of residence. They also have a greater pay-off from schooling and from on-the-job training (Chiswick 1983).

Further investigation of several hypotheses that could explain their higher levels of schooling and earnings suggests that the success of American Jews may be related to greater parental investments made before and during formal schooling (Chiswick 1985).

The purpose of this chapter is to examine investments in “child quality” by Jewish and non-Jewish families.¹ Child quality refers to the consequences of the

This is a revision of original article published in *Contemporary Jewry*, 9(2), Fall 1988, pp. 35–61. I appreciate the research assistance of Suchitra Channivichorn and the comments received from Carmel U. Chiswick, Donald Cox, Marianne Ferber and Evelyn Lehrer and at seminars at Queens University, Stanford University, University of California at Santa Barbara, and University of Illinois at Chicago. This paper was presented at a joint session of the annual meetings of the Association for Jewish Studies and the Association for the Social Scientific Study of Jewry, Boston, December 1985.

¹For the most definitive theoretical analysis of investments in child quality and the tradeoff between quantity and quality of children, see Becker (1981, Chaps. 5 and 6).

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investments of time and out-of-pocket expenditures made by parents, and by society as a whole, in children. It is assumed that a greater expenditure of time and other resources increases child quality. There are no moral implications intended.

Home-produced human capital for children, either prior to or concurrent with schooling, is time-intensive. If Jewish women are more intensely involved with their children than other women, they would have less time for other activities. Thus, Jewish women would be less likely to work when they have children, especially young children. Hence, an examination of the interaction of labor supply and the presence of children can shed light on this important issue. Besides providing some understanding of the American Jewish experience, the implications of this study deepen our insights about the determinants of racial and ethnic group differences in economic success.

The first section below develops the main hypotheses to be tested. A major inhibiting factor in comparative studies of Jews is the limited available data, so the second section discusses a procedure, previously used successfully for Jewish men, that is applied here for identifying Jewish women. This is followed by a section discussing the theoretical issues in labor supply relevant for this study that develops the estimating equations. After a section with the empirical analysis, in which labor supply equations are estimated for Jewish and non-Jewish women, differences in the determinants of labor supply are examined. The final section is a summary and conclusion in which the implications of the findings for investments in children's schooling and other forms of human capital are considered.

The Hypotheses

The objective is to test the hypothesis that Jewish parents make greater investments in their children's human capital before and during schooling. Children, particularly very young children, require a great deal of time. Following Leibowitz (1974a, 1974b) we may distinguish between hours of "personal care" (e.g., feeding, bathing) and "educational care" (e.g., playing, reading, talking) in the parental time allocated to child care.² Time devoted to the "educational care" activities is likely to have the most important impact on the quality of a child's life and to increase at a

²Other studies of the time devoted to child care include Gronau (1976), Hill and Stafford (1974, 1980) and Hunt and Kiker (1981). These studies find that time devoted to child care, particularly "educational care," rises with the level of parent's education. Other studies have found that greater parental time inputs (measured by mother's labor supply and marital status) raise the schooling and earnings of the child. See, for example, Fleisher (1977), Krein (1984) and Stafford (1985). Time budget studies for the U.S. have small sample sizes, far too small for studies of racial, ethnic or religious minorities' differences in investment in child quality.

more rapid rate than “personal care” as the total time devoted to child care increases. If so, parental time devoted to child care may be treated as an input in the production of able, resourceful children. Children require the most parental time when they are young; the time intensity declines with age and older children (i.e., teenagers and college-age children) may need more purchased goods and services (e.g., college tuition) from their parents more than they need parental time.

The ideal data set for testing the hypothesis would be a time budget survey that identified religion as well as the other demographic and economic characteristics of the household. In the absence of such data, the complement of time in home production is studied. It is assumed that time in labor-market activities is inversely proportional to parental time inputs in child care.

This issue can be addressed with census data (to be discussed below) through the testing of the following hypotheses:

- (1) The presence of children in their home has a greater depressing effect on labor supply for Jewish women than for other women.
- (2) Since young children (ages 0–6) need more attention than other children (ages 6–18), the greater depressing effect on labor supply of young children would be more intense for Jewish women.
- (3) Since older children (e.g., college age) need goods rather than parental time, other things being equal, Jewish women with no children in the home would exhibit a greater labor supply.

Data for Analyses of Jews

To understand the role of parental time investments in producing children who can attain the levels of schooling and earnings of adult Jews, it would be desirable to have data on parental investments in the current cohort of adults. These data are not available. An alternative approach is adopted here. It is assumed that the factors that influence group differences in investment in child quality do not vary sharply from generation to generation. Then, contemporary data on parental investment in child quality can be generalized to apply to Jews of previous generations.

It might be argued that changes over time in schooling and income may influence child investment practices. These variables, however, are held constant in the analysis. In addition, although the relative economic well-being of American Jews appears to have increased during the past century, Jews had a higher literacy rate and higher incomes than others of the same immigrant generation even at the turn of the century (see Chiswick 1985, Higgs 1971, Kahan 1978).

Data for labor market analyses of contemporary American Jews are scarce. An appropriate data file must include a means of identifying Jews, a sufficiently large sample of Jews and nonJews, and a survey methodology and questionnaire that is common to both groups. The U.S. Bureau of the Census does not ask religion in

its various household surveys and censuses (U.S. Bureau of the Census, 1973).³ Other data sources that ask religion (e.g., NORC General Social Survey, the National Fertility Surveys, the NBER Thorndyke Sample) are typically relatively small and since Jews are only 2.5 percent of the population there are two few observations on Jews for statistically reliable results.⁴ Surveys of the Jewish population may have a sufficiently large sample, but differences in sampling methodologies and in the questionnaires preclude meaningful detailed comparisons with other data sources for the population as a whole.

Recent studies have developed and implemented an indirect procedure for identifying Jews in the 1970 Census (Chiswick 1983 and Kobrin 1983).⁵ The questionnaire administered to 15 percent of the households asked the person's "mother tongue," that is, the language *other than or in addition to English spoken in the home when the person was a child*. There is no requirement that the respondent ever spoke or currently knows the language for it to be a non-English mother tongue. Adults (age 25–64) who reported Yiddish, Hebrew or Ladino (the language of Sephardic Jews) are presumably nearly exclusively Jewish.⁶

Many Jews may report English or some other mother tongue. The reporting of a typically Jewish mother tongue decreases with the number of generations the person's ancestors have lived in the U.S. It would therefore be appropriate to exclude third-and higher-generation Americans from the study. To include immigrants in the analysis, however, is to add additional complexities arising from the foreign experience. Thus, it is most reasonable to limit the analysis to second-generation Americans, that is, persons born in the U.S. but with one or both parents foreign born. About two-thirds of adult Jews in the U.S. in 1970 were second generation Americans. The mother-tongue procedure identified approximately 60 percent of second generation adult male American Jews in 1970 Census. Its power would be comparable to women since about 95 percent of adult married Jewish men in 1970 had Jewish wives (Massarik and Chenkin 1973).

Thus, although the mother tongue procedure using the 1970 Census is not ideal, it does offer the best mechanism available for analyzing Jewish-non-Jewish labor market behavior with a large sample size and with both groups responding to the same methodology and questionnaire. The procedure underestimates the number of

³The notable exception, the Supplement to the March 1957 Current Population Survey, will be discussed below.

⁴This is also a limiting feature of the Canadian and Australian Censuses which ask religion and identify Jews.

⁵This procedure cannot be used in the 1980 Census which had a retrospective question on "mother tongue" and none on parents' nativity. Responses to the 1980 Census "ancestry" question which revealed the person's religion were recoded to mask religion (i.e., a response of "Jewish" was coded as "other;" Polish Jew" as Polish," etc.).

⁶For a comparison of the Jews identified by this procedure and persons who self-reported themselves as Jews in the 1970–71 National Jewish Population Survey, see Kobrin (1983).

Jews, but estimating their number is not the purpose of this study. It is not obvious that there are systematic differences between identified and non-identified Jews, other things being the same.⁷ If there are no systematic differences between identified and non-identified Jews, the inclusion of non-identified Jews among the non-Jews imparts a small downward bias to the observed differences between Jews and non-Jews.

The Labor Supply Estimating Equations

The population under study consists of white females age 25–64 in 1970 who were not enrolled in school, were born in the U.S., but had at least one foreign-born parent. The variables used in the analysis are listed in Appendix Table 11.4. Three measures of labor supply are considered⁸:

- (1) Whether the woman worked at least one week in 1969 (WORK69),
- (2) The proportion of weeks she worked in 1969 (PCTWORK), and
- (3) The number of hours worked in the reference week, the last week in March 1970 (HRSWK).

The difference between desired and actual employment in the reference period is relatively small as 1969 and early 1970 were periods of very low unemployment. The unemployment rate in 1969, for example, was only 3.5 percent overall, and 3.7 percent for adult females (age 20 and over) (*Economic Report* 1983, Table B-31). Of the alternative dependent variables, hours worked is likely to be the poorest proxy for desired labor supply. It refers to only one week and may therefore be subject to substantial measurement error, and it may reflect systematic seasonal patterns.

Three variables (or sets of variables) determine female labor supply. These are real wage opportunities in the labor market, marginal productivity in home production, and income from sources other than the woman's labor market activities. Of course, there are no wage-rate data for women who do not work. This problem is solved by substituting for the wage variable a set of variables for which data exist for all women and that have been shown to be important determinants of the wages of women.

⁷Some tests for adult Jewish men suggest that there are no systematic differences in earnings among the Yiddish, Hebrew and Ladino speakers and that although the proportion of non-identified Jews would be expected to vary by country of origin (i.e., higher for Britain and Canada and Western Europe, lower for Poland and Russia), there were no variations in male Jewish earnings by country of origin (Chiswick 1983). Tests reported below indicate that among Jewish women labor supply does not vary by mother tongue or parent's country of birth. These tests suggest that the "mother tongue" procedure does not produce biased estimates of regression coefficients for second generation American Jews. See also Kobrin (1983).

⁸Linear regressions are computed to keep the structures similar across the dependent variables and because logarithms cannot be computed for those with a zero value for the labor supply variable or for dichotomous explanatory variables.

Wages rise with level of schooling and the number of years since leaving school, and decline with the extent of interruptions in labor market activity. Thus, the labor supply equation includes schooling (EDUCATION) and age (AGE and its square) as well as marital status and family structure. Because of the positive effects on the acquisition of on-the-job training of past labor supply and expected future behavior, wages would be greatest for women who never married (NEVERMAR) and least for married women living with their spouse (MARRSP). Past labor supply would be lower for women who have had a child (HAVCHILD) and the larger the number of children (CHILDBN), the lower it would be. These women would be expected to have lower current wage opportunities.

Current productivity in home activities may also be measured by the marital status and children variables—those living with families having greater home productivity.⁹ Thus labor supply would be lower for those currently married (MARRSP) and with children living at home. Because of the greater time required by younger children, the depressing effect on labor supply of children under 6 (CHILUN6) is greater than that of children in the household age 6–18 (CH6TO18).¹⁰

To control statistically for income and wealth effects on home productivity and leisure, family income from all sources other than the woman's labor market earnings is included in the equation. This is measured by total family income minus the earnings of the woman (OTFAMINC). It therefore includes the earnings of the spouse as well as all rental, dividend and interest income received from the family's assets.

The empirical analysis uses ordinary-least-squares (OLS) regressions to estimate the reduced form equations. Using one procedure for all of the analyses facilitates comparisons among dependent variables. The OLS procedure permits estimation with extremely large samples (nearly 70,000 observations), thereby reducing sampling error.

Empirical Analysis

Census-Regression Analysis

Among the adult white women in 1970 who were second-generation Americans, 5.6 percent reported a typically Jewish mother tongue. The Jewish women were more likely to have worked in the previous year (57 percent compared to 53 percent) and to have worked in a larger proportion of the weeks (45 percent compared to 42 percent of the weeks) (Table 11.5). This implies about 7 percent greater labor supply.

⁹For a theoretical and empirical analysis of the effects of children on the value of the mother's time in home production, see Gronau (1974).

¹⁰Productivity in home production may also rise with education and age, but these partial effects are likely to be much smaller than their impacts on market wages (Michael 1972).

The differences in hours worked in the reference week, however, are much smaller (15.4 hours for the Jewish women, and 15.2 for the others or 2 percent greater labor supply).

Some of the characteristics (explanatory variables) of Jewish women would encourage a greater labor supply. The Jewish women have more schooling (by 1.4 years), and are more urbanized. On average, they have fewer children under 6 and fewer children 6–18 years living in the household.

On the other hand, three variables would encourage a smaller labor supply. A larger proportion of the Jewish women are currently married (80 percent compared to 75 percent married, spouse present for non-Jews) and have ever had a child (84 percent compared to 81 percent). The Jewish women have higher family income from sources other than their own earnings (\$15,400 compared to \$11,200 in 1969). (Table 11.6)

All Women

The regression analyses in Tables 11.7, 11.8, 11.9, columns 1–3 indicate that for each of the three measures, labor supply is higher for women with more schooling, increases (but at a decreasing rate) with age, is lower in rural areas and in the South, is higher for women not currently married, is greatest for never-married women, and declines with other family income. The signs of the coefficients are the same for the Jewish and all-women analyses and the coefficients are highly significant.¹¹

Other things being the same, Jewish women appear to have a greater labor supply. They are nearly 2 percentage points more likely to have worked in 1969, and worked one percent more weeks, but they worked a shorter week (by 0.5 hours). Thus, most of the observed greater labor supply (as measured by weeks worked) can be attributed to the independent variables.

There are some important differences in the partial effects of the explanatory variables (Table 11.1 and Tables 11.7, 11.8, 11.9). The coefficient of the education variable is about 50 percent larger for Jewish women than for other women for the two measures of labor supply in 1969 (worked in 1969 and percent of weeks worked). This may reflect the greater labor market returns from schooling among American Jews or a greater sensitivity to the improved labor market opportunities provided by a higher level of education.¹² There is no significant difference in the

¹¹ The only exception is that residence in a rural area (only 2.4 percent of the Jewish women) is not associated with a lower labor supply among Jewish women.

¹² Higher market returns from schooling may reflect greater parental investment in their stock of home-produced human capital.

Table 11.1 Regression analysis of labor supply, selected coefficients, 1970^(a)

Independent variable	Dependent variable					
	Labor force participation (WORK69)		Percent of weeks worked (PCTWORK)		Hours worked (HRSWR)	
	Non- Jewish	Jewish	Non- Jewish	Jewish	Non- Jewish	Jewish
EDUCATION	0.025 (35.5)	0.037 (12.2)	0.020 (33.3)	0.029 (10.5)	0.838 (32.9)	0.974 (8.8)
HAVCHILD	- 0.031 (- 4.7)	- 0.011 (-0.4)	- 0.046 (- 8.0)	- 0.037 (- 1.3)	- 2.276 (-9.5)	- 2.531 (- 2.2)
CHILDBN	0.002 (1.5)	0.016 (1.6)	0.0006 (0.4)	0.013 (1.5)	0.150 (2.7)	0.890 (2.5)
CHILUN6	- 0.138 (- 34.8)	- 0.264 (- 11.5)	- 0.117 (- 33.7)	- 0.197 (- 9.6)	- 4.598 (- 31.4)	- 6.913 (- 8.3)
CH6TO18	- 0.037 (- 18.1)	- 0.062 (- 5.9)	- 0.041 (- 22.9)	- 0.070 (- 7.5)	- 1.60 (- 21.4)	- 2.861 (- 7.5)

t-ratios in parentheses
Sources: Appendix Tables 11.7, 11.8, 11.9
^(a)Partial effects of education and children variables, controlling for age, marital status, other family income and place of residence. Separate regressions for Jewish and non-Jewish women

education effect for the hours analysis. The effect of other family income appears to be the same for Jewish and non-Jewish women.¹³

Among those who have had a child, the effect on labor supply of the number and age structure of the children appears to differ (Table 11.1). These differences are highly statistically significant. The depressing effect on labor supply of children under 6 is much larger for Jewish women and the difference is statistically significant. An additional child under 6 reduces the probability of working in 1969 by about 14 percentage points for non-Jewish women, but by about 26 percentage points for Jewish women. The child’s presence reduces the proportion of weeks worked by about 12 percentage points for non-Jewish women but by about 20 percentage points for Jewish women. The differential effect on the hours variable is

¹³The benchmark can be changed from all non-Jews to British Isles non-Jews by adding dichotomous parent’s country of birth variables for non-Jews. When that is done there are essentially no changes in the Jewish coefficients or *t*-ratios in the pooled regressions. Of the country categories (see Table 11.4), the only significant differences are for those of Mexican and Canadian origins. For each measure of labor supply women of these origins work more than those of British origin, *ceteris paribus*:

	WORK69	PCTWORK	HRSWK
Canaunz	0.03 (3.1)	0.026 (3.6)	0.93 (3.1)
Mexico	0.08 (7.9)	0.048 (5.2)	2.03 (5.3)

Canaunz stands for Canada, Australia, and New Zealand, most of whom were Canadian.

smaller-by 4.6 hours for the non-Jewish women and by 6.9 hours for the Jewish women.

A comparable pattern emerges for children 6–18, although their depressing effect on labor supply is smaller. Children age 6–18 lower the probability of working by 3.7 percentage points per child for the non-Jewish women and by 6.2 percentage points for the Jewish women, the proportion of weeks worked is lower by 4 percentage points and 7 percentage points, respectively. The hours effect is 1.6 hours for non-Jewish women, yet nearly 3 hours for Jewish women. These Jewish-non-Jewish differences are also statistically significant.

An interesting pattern emerges among women who have had children, but with no children under 18 living at home. Among the non-Jewish women, labor force participation (worked in 1969) for women with adult children (over age 18) is lower by 3 percentage points compared to those who never had a child and each additional child has an insignificant effect on current labor supply. This may reflect the effects of a lower earnings potential because of the shorter past labor supply. Among the Jewish women, however, there is no difference in labor force participation between those who never had a child and those with one child over age 18. And, labor force participation rises with the number of children ever born. This implies that whatever depressing effects on current wages previous labor force absence may have, it is offset by some other factor. This other factor is not simply an “income effect” of a larger family (income per person is lower), because income effects appear to be the same across religious groups. It may, however, reflect a greater responsiveness to older children’s need for more goods.¹⁴

Although the magnitudes vary, similar patterns emerge for the other measures of labor supply. Comparing women who never had a child with those with a child over age 18 indicates that the depressing effect of having had a child on the proportion of weeks worked is smaller for Jewish women. The first child reduces the proportion of weeks worked by 4.5 percentage points ($-4.6 + 0.1$) for non-Jewish women and by 2.4 percentage points ($-3.7 + 1.3$) for Jewish women. The negative effect persists among non-Jewish women but among Jewish women it disappears by the third child.

Table 11.2 presents in summary fashion the difference in the proportion of Jewish and non-Jewish women who worked in 1969. The overall difference of 3.5 percentage points is reduced to 1.7 percentage points when other variables are the same. Within each category for number of children, the labor supply of Jewish women relative to other women increases with the level of education. Within schooling levels, the Jewish women have lower labor supply relative to other women the larger the number and the younger the age of the children. Thus, Jewish women without children at home have a greater labor supply, and the relative difference rises with their schooling level. However, the greater the number and the younger the age of

¹⁴Catsiapis and Robinson (1981) show that among unmarried post secondary school students, Jewish students receive larger financial contributions from their parents than do other students, even after controlling for their family income and receipt of scholarships and grants. Chiswick and Cox (1986) show that groups that anticipate lower rates of return from schooling (e.g., Blacks and Hispanics compared to non-Hispanic whites) make smaller *inter vivos* transfers to their college-age children. This would be consistent with both the higher observed rate of return from schooling for Jewish men and greater parental transfers when they are college age.

Table 11.2 Differences in labor force participation between Jewish and Non-Jewish women by education and number of children in the household, 1970^{a, b} Jewish minus non-Jewish, percentage points)

Education (years)	Number of children in household					
	One child			Two children		
	None	Under 6	6–18	Two under 6	One under 6 and one 6–18	Two 6–18
10	+1.7	–10.9	–3.4	–23.5	–13.0	–5.5
12	+3.9	–8.7	+1.9	–21.3	–10.8	–0.2
16	+8.4	–4.2	+6.3	–16.8	–6.3	+4.2

Source: Statistical Appendix Table 11.7, Column 2

^aComputed from a pooled Jewish-non-Jewish regression of labor force participation on age, education, marital status, family income, geographic area, and children variables, with interactions between the Jewish variable and the education and children variables

^bThe observed difference is +3.5 and the difference *ceteris paribus* is +1.7

their children, the more likely are Jewish women to withdraw from the labor force relative to other women.

Women Who Work

The labor supply equations are re-estimated in the last column in Tables 11.8 and 11.9 deleting observations with zero weeks or hours of work. This reduces the sample sizes by about 50 percent. Among those who worked, there is no significant effect of children under age 6 on Jewish non-Jewish differences in labor supply. Thus, the effect of children under 6 is to depress the participation rate of Jewish women by more than other women, but not to have a differential effect for those who remain working.

Among those who work, children age 6–18 have a greater depressing effect on weeks and hours worked among Jewish than among non-Jewish women. The implication is that as children reach school age more mothers return to work, but Jewish mothers who return to the labor market work a shorter year and fewer hours in the week. The Jewish mothers who are employed may be adjusting their schedules so as to work when their schoolage children are in school and be at home when their children are out of school. This may explain a greater preference for becoming school teachers among Jewish than among other women.

Differences Among Jews

An examination of differences in labor supply behavior among Jewish women provides additional insights into the issues. In particular, differences among Jews by parent's country of birth and by mother tongue can be studied. These differences may be of special interest since the proportion of second-generation American Jews identified as such can be expected to vary by parent's country of birth. The

proportion would be higher for Jews from Russia, Poland and other parts of Eastern Europe and lower for those with parents born in Western Europe or Canada. In addition it is important to determine whether the observed patterns are universal among Jews or the characteristics of a particular subset.

The parent's country of birth refers to the father's if he was foreign born and the mother's if he were born in the U.S. In the Jewish sample, 59.3 percent reported Russia (excluding the Baltic Republics) as the parent's country of birth, 17.7 percent Poland, 4.0 percent Baltic Republics, 2.0 percent Czechoslovakia and Hungary, 5.0 percent Asia, Africa and Balkans and 12 percent Northern and Western Europe and the rest of the world. Using Russia as the benchmark, adding dichotomous variables for the country groupings lowers the adjusted R² (i.e., the added variables have a combined F-ratio less than unity) for each of the dependent variables. In only one instance does a country variable approach statistical significance: Poland, in the hours of work equation (coef. 1.3, $t = 1.8$).

In the sample under study, 3.9 percent reported Hebrew as their mother tongue, none reported Ladino and the others reported Yiddish. Various tests of labor supply difference for the three dependent variables between the Yiddish and Hebrew group reveal no significant differences. In general, the F-ratios for the set of Hebrew variables and the t-ratios for individual variables are not statistically significant. The only exception is a smaller depressing effect on working in 1969 (WORK69) of children under age 6 among the Hebrew group (interaction coefficient 0.226, $t = 2.73$). As with the one significant coefficient in the country analysis, given the large number of coefficients estimated, one significant coefficient may arise from chance.

Thus, there are apparently no significant differences in labor supply behavior among Jewish women depending on their parent's country of birth or the mother tongue (Yiddish or Hebrew). The difference in behavior between Jews and non-Jews is not the result of the characteristics or behavior of a subset of Jews, e.g., those of Russian or German origin. Rather it reflects some more fundamental characteristics common to second-generation American Jews.

Changes Over Time-1957 to 1970

The Supplement to the March 1957 Current Population Survey (CPS) asked the religion of each person age 14 and over in the 35,000 households sampled. Although there is no Public Use Sample for these data, several unpublished tables on socioeconomic characteristics have been made available (U.S. Bureau of the Census 1958, and undated). One table reported the labor force participation rates of married women whose spouses were present in March 1957, and is reproduced in the first six columns of Table 11.3. The final three columns of Table 11.3 use the 1970 Census and the mother tongue technique to replicate the March 1957 table.

In 1957, Jewish women consistently had lower labor force participation rates than white Protestant women and all women. Although overall Jewish women had a

Table 11.3 Labor force participation rates for married women, spouse present, by Religion, March 1957 and March 1970

	All women ages 14 and over, 1957						White women age 25–64 second generation Americans, 1970		
	Jewish	Protestant Total	White	Non-White	Roman Catholic	Total ^(a)	Jewish ^(b)	Non-Jewish	Total
<u>Total</u>	27.8	30.7	29.6	40.4	27.3	29.6	51.7	46.8	47.1
<u>Age</u>									
Under 35	21.7	29.2	28.5	34.4	24.6	27.7	37.3	42.8	42.6
35–44	24.5	37.8	36.1	51.1	31.5	35.7	50.3	47.4	47.5
45–64	30.6	32.9	31.6	45.0	30.9	32.3	53.8	47.4	47.8
<u>Presence of children</u>									
No children under 18	30.0	35.7	34.1	47.7	36.6	36.7	55.4	50.2	50.6
With children 6–17, none under 6	28.6	37.5	36.2	52.6	35.3	17.0	49.2	44.7	44.9
With children under 6	11.8	18.9	18.2	23.6	13.2	17.0	25.1	31.1	30.9
<u>Urban areas – Age</u>									
Total	24.8	33.1	31.5	43.6	28.5	31.2	51.7	46.9	47.3
Under 35 years	21.8	32.7	31.6	39.2	26.3	30.2	37.5	42.6	42.4
35–64 years	28.2	36.9	35.1	49.0	32.2	34.9	52.9	47.6	48.0

^(a)Includes persons with other religion, no religion and religion not reported

^(b)Women who reported Yiddish, Hebrew or Ladino as their mother tongue. All other women are classified as non-Jewish

Source: U.S. Bureau of the Census, “Tabulation of Data on the Social and Economic Characteristics of Major Religious Groups, March, 1957,” no date, Table 13

1970 Census of Population, Public Use Sample, 15 percent Questionnaire, 1/100 Sample

slightly higher participation rate than Roman Catholic women, when statistical controls for age or presence of children are introduced the Jewish women had lower participation rates than the Catholic women. Compared to white Protestant women and all women, the presence of young children in the home had a larger depressing effect on Jewish female labor supply. A Jewish labor force participation rate of about 30 percent for those with no children under 18 or children 6 to 17 falls to 12 percent if there is a child under 6 (a 60 percent decline). Among white Protestants the comparable rate is about 35 percent, which declines to 18 percent (50 percent decline). Only among Roman Catholics is the decline steeper (about 65 percent),

but Roman Catholic women with children under 6 are likely to have more young children than do the Jewish women.¹⁵

Labor force participation rates for women increased sharply in the 1950's and 1960's. This is reflected in Table 11.3 in the higher participation rates among Jewish and non-Jewish women, within each age and children category, in the 1970 Census than in the 1957 CPS. Participation rates, however, appear to have increased more sharply for Jewish women, from 2 percentage points less than that of all women in 1957 to 4¼ percentage points more in 1970. In 1970 married Jewish women with no children under 18 and with children 6–18 had higher participation rates than non-Jewish women; only those with children under 6 years of age (or in the under 35 age group) had lower participation rates.

The sharp relative rise in Jewish female participation rates is consistent with the 1970 Census regression analysis. Participation by Jewish women shows greater responsiveness to schooling level and the number and age of their children. Even if the increase over time in schooling and the decline over time in fertility were the same for Jews and non-Jews, Jewish women would exhibit a steeper rise in their labor force participation rates.

Summary and Conclusion

This chapter has been concerned with the effects of children on the labor supply behavior of Jewish and non-Jewish women. Using data on adult white second-generation Americans in the 1970 Census of Population, Jewish women are identified as those who reported a typically Jewish mother tongue (language other than or in addition to English spoken in the home when the person was a child). Three measures of labor supply are considered: whether the woman worked in 1969, the proportion of weeks worked in 1969, and the number of hours worked in the reference week in 1970.

¹⁵ Catholic married women have a much larger number of children than Jewish women. The number of children ever born per woman aged 15–44 years (standardized by age), by religion in March 1957:

	All Women		Ever Married Women	
	U.S.	Urban	U.S.	Urban
Protestant	1.7	1.5	2.2	2.0
Non-white (all religions)	2.0	1.6	2.7	2.2
Roman Catholic	1.6	1.5	2.2	2.1
Jewish	1.2	1.2	1.6	1.6
All	1.7	1.5	2.2	2.0

Sources: U.S. Bureau of the Census, 1958 and n.d.

Other things being the same, including other family income, Jewish women have a lower labor supply than other women if there are young children (under age 6) in the home. Children age 6–18 also have a greater depressing effect on the labor supply of Jewish women, both in terms of participating at all and the extent of work (weeks and hours) for those who do work. Among women without children at home, those who are Jewish are more likely to work. Jewish women respond more sharply to the favorable effect of schooling on labor supply. As a result, Jewish women without children at home, or with only one child age 6–18, are more likely to participate in the labor market, and the effect rises with the level of schooling. Further research is required to determine whether these patterns are to be found among those with native-born parents.

The observed patterns of labor supply among American Jewish women are not a consequence of their “mix” by parent’s country of origin. The patterns in comparison with non-Jews are the same whether the benchmark is all white non-Jews or those from the British Isles. Perhaps more interesting, there are apparently no significant differences in labor supply among second generation American Jews depending on the parent’s country of birth or their mother tongue (Hebrew or Yiddish). The labor supply differences from non-Jews appear to be a characteristic of American Jews as a group. Further research is required to determine whether similar patterns also exist in other countries, that is, whether this is a universal characteristic of Jews.

The partial effects estimated using the cross-sectional data help explain the apparent rise in the labor force participation rate of Jewish women relative to other women from 1957 to 1970. Even though both groups experienced the same decline in fertility and the same rise in schooling level during this period, the partial effects imply a greater increase in Jewish female labor supply.

The observed labor supply behavior is consistent with the hypothesis that Jewish mothers make greater investments of their own time in the home-produced human capital of their children prior to and concurrent with schooling. Jewish mothers are more likely to work when their children are “goods intensive,” that is, when there are no children under 18 in the home, and their offspring need goods rather than time. If these behavioral patterns have continued from generation to generation, the greater investments in the child’s abilities may contribute to the higher earnings and greater returns from schooling and on-the-job training observed among adult Jewish men.¹⁶

The reasons for the observed differences in labor supply responses and the effects of parental time inputs on child quality and subsequent labor market success require further study so that we can better understand not only the American Jewish experience, but also the determinants of socioeconomic outcomes among the myriad racial, ethnic and religious groups that form the population of this country and others.

¹⁶This interpretation provides insights regarding racial and ethnic group differences among adult men in schooling, earnings, and employment. For example, several studies using different data files have shown that, other things the same, black women have higher labor force participation rates than white women, and that their participation rates decline by much less when there are young children in the home. (See, for example, Bowen and Finegan (1969), Bell (1974), and Lehrer and Nerlove (1984).)

Statistical Appendix

Table 11.4 List of variables used in analysis of Jewish female labor supply

Population: White women aged 25–64 years in 1970, not enrolled in school, born in the U.S. but with one or both parents foreign born

Variables	Code	Description
<u>Dependent variables</u>		
Labor supply decision	WORK69 PCTWORK HRSWK	Worked last year (1969) $PCTWORK = WEEKWORK/52$ Proportion of weeks worked in 1969 The number of hours nworked in the reference week (last week in March 1970)
<u>Explanatory variables</u>		
Age	AGE AGESQ	$AGESQ = AGE * AGE$
Level of schooling	EDUCATION	Years of school completed
Urban/rural residence	RURALEQ1	Dichotomous variable, equal to unity for a person living in a rural area
Region	SOUTHEQ1	Dichotomous variable, equal to unity for a person living in the south
Marital status	MARRSP, SPOUSEAB, WIDOWED, NEVERMAR	Dichotomous variables: Married spouse present (MARRSP); married, spouse absent or divorced or separated (SPOUSEAB); widowed (WIDOWED); never married (NEVERMAR)
Fertility / family structure	CHILDBN HAVCHILD CHILUN6 CH6TO18	The number of children ever born Dichotomous variable equal to unity if at least one child was born Number of related children under 6 years old in household $CH6TO18 = CHILUN18 - CHILUN6$ number of related children between age 6 and 18 in household
Religion	JEWISH JEWCHUN6 JEWCH618 JEWEDUC	Dichotomous variable equal to unity if Yiddish, Ladino (Judeo-Spanish, Sephardic), or Hebrew was spoken in the home when the person was a child. $JEWISH * CHILUN6$ $JEWISH * CH6TO18$ $JEWISH * EDUCATION$
Income (in thousands of dollars)	FAMINC1 WSEARN1 OTFAMINC	Total income of family of primary individual Earnings in 1969 (wages, salary, and self-employment income) $OTFAMINC = FAMINC1 - WSEARN1$ family income other than the women's earnings
Country of birth of parents	BRIT, WESTEUR, CENEUR, SOUTH EUR, RUSSIA, BALKANS, CANAUNZ, MEXICO, OTHALATIN, AFRASIA	Dichotomous variables defined to equal unity for non-Jews with the parent born in that country or region. Parent's country of birth was the father's if he was foreign born and the mother's if he was native born: British Isles; other Western Europe; Central Europe; Southern Europe; USSR; Balkans; Canada, Asia

Table 11.5 Means and standard deviations for native-born white women (with foreign-born parents) Aged 25–64, 1970

Variable	Jewish		Non-Jewish		Total	
	Mean	SD	Mean	SD	Mean	SD
WORK69	0.5673	0.4955	0.5317	0.4990	0.5337	0.4989
PCTWORK	0.4487	0.4479	0.4196	0.4450	0.4212	0.4452
HRSWK	15.3912	18.0592	15.2399	18.7010	5.2483	18.6657
AGE	49.3855	9.1882	47.6485	10.1773	47.7453	10.1325
AGESQ	2523.3	866.0	2374.0	939.4	2382.3	936.1
EDUCATION	12.5644	2.5703	11.1522	2.8144	11.2310	2.8200
RURALEQ1	0.0235	0.1514	0.1543	0.3613	0.1470	0.3542
SOUTHEQ1	0.0895	0.2854	0.0955	0.2940	0.0952	0.2935
MARRSP	.8002	0.3999	0.7549	0.4302	0.7574	0.4287
SPOUSEAB	0.0613	0.2399	0.0735	0.2610	0.0728	0.2599
WIDOWED	0.0775	0.2674	0.0888	0.2845	0.0882	0.2836
NEVERMAR	0.0610	0.2394	0.0828	0.2756	0.0816	0.2737
HAVCHILD	0.8404	0.3663	0.8052	0.3961	0.8071	0.3945
CHILDBN	1.9207	1.2250	2.3317	1.9155	2.3088	1.8861
CHILUN6	0.1197	0.4099	0.2107	0.5637	0.2056	0.5567
CH6TO18	0.6291	0.9820	0.8773	1.2836	0.8634	1.2700
JEWISH	1.000	0.0	0.0	0.0	0.0557	0.2294
BRIT	0.0	0.0	0.1225	0.3278	0.1157	0.3198
WESTEUR	0.0	0.0	0.2472	0.4314	0.2334	0.4230
CENEUR	0.0	0.0	0.1588	0.3655	0.1500	0.3570
SOUTHEUR	0.0	0.0	0.2082	0.4060	0.1966	0.34
RUSSIA	0.0	0.0	0.0710	0.2568	0.0670	0.2501
BALKANS	0.0	0.0	0.0363	0.1871	0.0343	0.1820
CANAUNZ	0.0	0.0	0.0870	0.2818	0.0822	0.2746
MEXICO	0.0	0.0	0.0504	0.2188	0.0476	0.2129
OTHLATIN	0.0	0.0	0.0047	0.0686	0.0045	0.0667.
AFRASIA	0.0	0.0	0.0139	0.1172	0.0132	0.1139
OTFAMINC ^(a)	15.3722	15.0665	11.1870	12.3992	11.4203	12.5993
FAMINC1 ^(a)	18.2323	15.0268	13.3735	12.4529	13.6444	12.6593
WSEARN1 ^(a)	2.8602	4.0678	2.1865	3.2263	2.2241	3.2825
Sample size	3834		64,948		68,782	

^(a)Income in thousands of dollars

Source: 1970 Census of Population, Public Use Sample, 15% Questionnaire, 1/100 Sample

Table 11.6 Means and standard deviations for native-born white women (with foreign-born parents) Aged 25–64 who worked at least one week in 1969

Variable	Jewish		Non-Jewish		Total	
	Mean	SD	Mean	SD	Mean	SD
WORK69	1.0000	0.0	1.0000	0.0	1.0000	0.0
PCTWORK	0.7909	0.2879	0.7890	0.2844	0.7891	0.2846
HRSWK	26.5347	16.3838	28.0157	16.9002	27.9279	16.8735
AGE	49.6749	8.6729	47.4817	9.8541	47.6116	9.8017
AGESQ	2542.8	819.7	2351.6	902.1	2362.9	898.5
EDUCATION	12.8460	2.6059	11.4828	2.7815	11.5636	2.7900
RURALEQ1	0.0234	0.1514	0.1416	0.3486	0.1346	0.3413
SOUTHEQ1	0.0782	0.2685	0.887	0.2843	0.0880	0.2834
MARRSP	.7292	0.4445	0.6639	0.4724	0.6677	0.4710
SPOUSEAB	0.0887	0.2844	0.1016	0.3021	0.1008	0.3011
WIDOWED	0.0943	0.2922	0.1077	0.3100	0.1069	0.3089
NEVERMAR	0.0878	0.2831	0.1269	0.3328	0.1246	0.3302
HAVCHILD	0.8074	0.3945	0.7498	0.4331	0.7532	0.4311
CHILDBN	1.8046	1.2287	2.0600	1.8192	2.0449	1.7907
CHILUN6	0.0515	0.2558	0.1276	0.4317	0.1231	0.4237
CH6T018	0.5531	0.9214	0.7583	1.1976	0.7462	1.1840
JEWISH	1.0	0.0	0.0	0.0	0.0592	0.2361
BRIT	0.0	0.0	0.1236	0.3291	0.1162	0.3205
WESTEUR	0.0	0.0	0.2471	0.4313	0.2324	0.4224
CENEUR	0.0	0.0	0.1557	0.3626	0.1465	0.3536
SOUTHEUR	0.0	0.0	0.2067	0.4049	0.1944	0.3958
RUSSIA	0.0	0.0	0.0723	0.2589	0.0680	0.2517
BALKANS	0.0	0.0	0.0374	0.1898	0.0352	0.1843
CANAUNZ	0.0	0.0	0.0907	0.2872	0.0853	0.2794
MEXICO	0.0	0.0	0.0469	0.2115	0.0442	0.2054
OTHLATIN	0.0	0.0	0.0049	0.0698	0.0046	0.0677
AFRASIA	0.0	0.0	0.0147	0.1203	0.0138	0.1167
OTFAMINC ^(a)	12.7352	12.3777	9.6842	11.4389	9.8650	11.5190
FAMINC1 ^(a)	17.7389	12.9079	13.7522	11.7420	13.9884	11.8515
WSEARN1 ^(a)	5.0037	4.3070	4.0680	3.4663	4.1235	3.5286
Sample size	2175		34,535		36,710	

^(a)Income in thousands of dollars

Source: 1970 Census of Population, Public Use Sample, 15% Questionnaire, 1/100 Sample

Table 11.7 Regression analysis of labor force participation (WORK69) for native-born white women (with foreign-born parents) aged 25–64, 1970

Variable	All		Jewish
	(1)	(2)	(3)
AGE	0.02851 (17.0996)	0.02842 (17.0471)	0.02662 (3.2821)
AGES	–0.00037 (–20.8475)	–0.00037 (20.8304)	–0.00034 (–3.9603)
EDUCATION	0.02495 (11.6647)	0.02450 (35.5451)	0.03721 (12.2190)
RURALEQ1	–0.02151 (–4.2304)	–0.02153 (–4.2352)	0.03959 (0.8075)
SOUTHEQ1	.02573 (–4.2324)	–0.02644 (–4.3494)	–0.05873 (–2.2561)
SPOUSEAB	0.22373 (32.014)	0.22336 (31.9726)	0.20977 (6.5846)
WIDOWED	0.18415 (27.6958)	0.18436 (27.7365)	0.12667 (4.3392)
NEVERMAR	0.26007 (32.3179)	0.26004 (32.3264)	0.20765 (5.4714)
OTFAMINC	–0.00540 (–36.7466)	–0.00540 (–36.7491)	–0.00625 (–11.8758)
HAVCHILD	–0.03125 (–4.8060)	–0.03077 (–4.7334)	–0.01124 (–0.3592)
CHILDBN	0.00245 (1.6610)	0.00221 (1.4933)	0.01576 (1.6284)
CHILUN6	–0.14109 (–35.9816)	–0.133 (–34.8382)	.26375 (–11.4908)
CH6TO18	–0.03702 (–18.4997)	–0.03650 (–18.0785)	–0.06227 (–5.9432)
JEWISH	0.01681 (2.1331)	–0.09378 (–2.4333)	(a)
JEWCHUN6	(a)	–0.12614 (–6.6510)	(a)
JEWCH618	(a)	–0.02090 (–2.6247)	(a)
JEWEDUC	(a)	0.01113 (3.6204)	(a)
CONSTANT	–0.12441	–0.11668	–0.25266
SAMPLE SIZE	68,782	68,782	3,834
R ²	0.12554	0.12630	0.14676
Adj. R ²	0.12536	0.12608	0.14386
SE	0.46655	0.46636	0.45839

t-ratios are in parentheses

(a) Variable not included

Source: 1970 Census of Population, Public Use Sample, 15% Questionnaire, 1/100 Sample

Table 11.8 Regression analysis of percent of weeks worked (PCTWORK) for native-born white women (with foreign-born parents) Aged 25–64, 1970

Variable	All ^(a)		Jewish ^(a)	All ^(b)
	(1)	(2)	(3)	(4)
AGE	0.03481 (23.7854)	0.03477 (23.7623)	0.03966 (5.4531)	0.01982 (14.9432)
AGESQ	–0.00042 (–26.7270)	–0.00042 (–26.7389)	–0.00046 (–5.9907)	–0.00020 (–14.1160)
EDUCATION	0.02042 (34.4953)	0.02014 (33.2806)	0.02859 (10.4718)	0.00048 (0.8643)
RURALEQ1	–0.03344 (–7.4929)	–0.03343 (–7.4937)	0.11529 (0.2627)	–0.02903 (–6.8696)
SOUTHEQ1	–0.02230 (–4.1779)	–0.02283 (–4.2789)	–0.05990 (–2.5665)	–0.00143 (–0.2828)
SPOUSEAB	0.23096 (37.6513)	0.23067 (37.6133)	0.22349 (7.8243)	0.0831 (16.8779)
WIDOWED	0.17973 (30.7956)	0.17998 (30.8457)	0.12671 (4.8416)	0.05679 (11.3694)
NEVERMAR	0.27947 (39.5650)	0.27941 (39.5690)	0.23977 (7.0463)	0.08623 (15.3116)
OTFAMINC	–0.00476 (–36.9215)	–0.00476 (–36.8903)	–0.00538 (–11.4015)	–0.00096 (–7.3532)
HAVCHILD	–0.04639 (–8.1274)	–0.04591 (–8.0432)	–0.03699 (–1.3176)	–0.03030 (–5.9091)
CHILDBN	0.00078 (0.6033)	0.00056 (0.4290)	0.01263 (1.4560)	–0.00443 (–3.4592)
CHILUN6	–0.11910 (–34.6046)	–0.11692 (–33.6659)	–0.19742 (–9.5930)	–0.06221 (–16.1865)
CH6TO18	–0.04134 (–23.5369)	–0.04062 (–22.9206)	–0.07048 (–7.5025)	–0.02412 (–14.2014)
JEWISH	0.00985 (1.4237)	–0.05395 (–1.5947)	(c)	0.01908 (0.6301)
JEWCHUN6	(c)	–0.0883 (–5.3036)	(c)	0.00327 (0.1378)
JEWCH618	(c)	–0.02519 (–3.6036)	(c)	–0.01611 (–2.4413)
JEWEDUC	(c)	0.00724 (2.6814)	(c)	–0.00140 (–0.5941)
CONSTANT	–0.36715	–0.36279	–0.5946	0.36804
SAMPLE SIZE	68,782	68,782	3834	36,710
R ²	0.15413	0.15471	0.16048	0.08306
Adj. R ²	0.15296	0.15450	0.15763	0.08264
SE	0.40951	0.40938	0.41108	0.27262

t-ratios are in parenthesis^(a)Includes those who did not work in 1969^(b)Only for those who worked in 1969^(c)Variable not included

Source: 1970 Census of Population, Public Use Sample, 15% Questionnaire, 1/100 Sample

Table 11.9 Regression analysis of number of hours worked (HRSWK) for native-born white women (with foreign-born parents) Aged 25–64, 1970

Variable	All ^(a)	Jewish ^(a)	All ^(b)	
	(1)	(2)	(3)	(4)
AGE	1.5391 (24.9730)	1.53934 (24.9714)	1.73032 (5.8692)	0.34916 (5.9646)
AGESQ	−0.01845 (−27.8366)	−0.01847 (−27.8636)	−0.01981 (−6.4276)	−0.00387 (−6.0833)
EDUCATION	0.83886 (33.6475)	0.83754 (32.8562)	0.97380 (8.7983)	0.00824 (0.3406)
RURALEQ1	−0.91385 (−4.8612)	−0.91158 (−4.8498)	− 0.80225 (0.4506)	0.83032 (4.4570)
SOUTHEQ1	0.18230 (−0.8112)	0.16766 (−0.7457)	−1.12572 (−1.1895)	2.22466 (10.1853)
SPOUSEAB	10.19997 (39.4751)	10.19263 (39.4518)	9.92450 (8.5707)	3.98471 (19.1457)
WIDOWED	7.50302 (30.5200)	7.5135 (30.5663)	6.19131 (5.8354)	1.92231 (9.0688)
NEVERMAR	12.07572 (40.5858)	12.07168 (40.5790)	9.96659 (7.2252)	3.00608 (12.7002)
OTFAMINC	−0.18007 (−33.1502)	−0.17977 (−33.0936)	− 0.20727 (−10.8351)	− 0.02336 (−4.2240)
HAVCHILD	−2.29192 (−9.5323)	− 2.27561 (−9.4643)	− 2.53059 (−2.2237)	−1.82494 (−8.2185)
CHILDBN	0.15616 (2.8615)	0.15001 (2.7465)	0.89033 (2.5312)	0.16674 (2.9624)
CHILUN6	−4.66092 (−32.1489)	− 4.59829 (−31.4288)	−6.91278 (−8.2861)	−1.47825 (−8.1416)
CH6TO18	−1.62939 (−22.0249)	−1.60099 (−21.4413)	−2.86146 (−7.5133)	−1.13924 (−15.3039)
JEWISH	−0.52770 (−1.8111)	−0.49141 (− 0.3450)	^(c)	1.10724 (0.8538)
JEWCHUN6	^(c)	− 2.6068 (−3.7166)	^(c)	− 0.83795 (−0.7355)
JEWCH618	^(c)	− 0.98293 (− 3.3372)	^(c)	−1.02326 (−3.5716)
JEWEDUC	^(c)	0.07223 (0.6348)	^(c)	−0.18647 (−1.8531)
CONSTANT	−20.06017	− 20.03502	−27.66077	27.94811
SAMPLE SIZE	68,782	68,782	3834	36,710
R ²	0.14614	0.14649	0.15136	0.06141
Adj. R ²	0.14597	0.14628	0.14847	0.06089
SE	17.24970	17.24661	16.66478	10.69820

t-ratios are in parenthesis

^(a)Includes those who did not work in 1969

^(b)Only for those who worked in 1969

^(c)Variable not included

Source: 1970 Census of Population, Public Use Sample, 15% Questionnaire, 1/100 Sample

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Chapter 12

Differences in Education and Earnings Across Racial and Ethnic Groups: Tastes, Discrimination and Investments in Child Quality



Barry R. Chiswick

Introduction

Until recently, research in the United States on group differences in socioeconomic success, as measured by schooling, occupation, and earnings, was limited to the comparison of blacks and whites. This focus was understandable for two reasons. First, there was an imperative public policy concern with black-white differences and the implications of historical and contemporary discrimination against blacks. Second, since blacks are the largest and most easily identifiable minority, the available data facilitated research on a black-white dichotomy.¹ As a consequence, much of our thinking regarding group differences in schooling and in the implications of schooling for occupational attainment, earnings, fertility, and other matters is influenced by the black-white pattern (Chiswick and Chiswick 1984). Under this view

This is a revision of the original article published in *Quarterly Journal of Economics*, 103(3), August 1988, pp. 571–597.

An early version of this paper was written for and presented at the National Academy of Education Conference on the State of Education. It has benefited from the comments of William Bridges, Carmel U. Chiswick, Gary S. Becker, Daniel Hamermesh, Christopher Jenks, Evelyn Lehrer, Jacob Mincer, Theodore W. Schultz, Teresa A. Sullivan, and Lawrence H. Summers, as well as those received at seminars and workshops at Australia National University, Northwestern University, Ohio State University, Queen's University, University of Chicago, University of Illinois at Chicago, and Stanford University. It was also presented at the 1987 annual meetings of the Population Association of America. The research was financed in part by the Center for the Study of the Economy and the State, University of Chicago.

¹ Much of the data for early analyses (1950s–1970s) was in terms of a white-nonwhite dichotomy, but blacks comprised about 90 percent of nonwhites in these data.

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B. R. Chiswick (ed.), *Jews at Work*, Studies of Jews in Society 2,
https://doi.org/10.1007/978-3-030-41243-2_12

racial discrimination (past or present) is assumed to be the primary cause of a variety of unfavorable outcomes, including lower levels of schooling and earnings, and a lower rate of return from schooling, for blacks than for whites.

In recent years, however, there has been a return to the turn-of-the-century interest in the multiplicity of racial and ethnic groups in the U. S. population. This interest is in part a consequence of the civil rights activities of the 1960s and 1970s that raised levels of consciousness regarding ethnicity and restored pride in ethnic identity. It is also a consequence of the increase in immigration during the past quarter century, particularly from Latin America and Asia. Data on a variety of racial and ethnic groups are now available and have been studied, with interesting and puzzling patterns emerging.

Within this broader multigroup perspective, the next section examines data on the mean levels of schooling and earnings, and rates of returns from investments in schooling, for a variety of racial and ethnic groups. Among adult native-born men, those identified as Jews, Chinese, Japanese, and foreign-parentage blacks have high levels of schooling and earnings, while native-born Filipinos, Mexican Americans, American Indians, and native-parentage blacks are far less successful than average. Rates of return are also shown to vary systematically across groups, with the former groups having higher rates than the latter.

The following section discusses these patterns within the context of a model for the supply and demand for funds for investment in schooling. This permits a test of alternative hypotheses. The evidence suggests that demand conditions vary more across groups than do supply conditions. Since demand curves are higher for those with greater ability, it is inferred that there are group differences in family investments in the "quality" of their children.

A fourth section follows this line of reasoning by developing a simple model for the allocation of parental resources. It is shown that if in an initial period two groups are of equal wealth but differ in the price of quantity relative to quality of children, and if these price differences persist, successive generations will differ systematically in fertility, schooling, earnings, and rates of return from schooling.

Evidence is then presented to test the application of the "quantity-quality" trade-off model to racial and ethnic groups. Family background, fertility, and female labor force participation are considered. A more favorable family background, in terms of the education and income of parents, fewer siblings with whom to compete for parental time and resources, and more parental time inputs into child care may be responsible for some groups having higher rate of return schedules and hence for their making larger investments in schooling.

The final section has a summary and conclusion that develops the policy implications of the analysis.

Multigroup Perspective on Schooling and Earnings

Table 12.1 presents data on earnings and schooling by race and ethnicity from the 1970 Census of Population for adult native-born men.² In addition to blacks, the Mexican Americans, Filipinos, and American Indians have lower levels of earnings and schooling than white men. On the other hand, the Chinese and Japanese have higher levels of earnings and schooling than whites, and American Jews have much higher levels of earnings and schooling than other whites.³ Moreover, among blacks, those with foreign-born parents (primarily of West Indian origin) have a schooling level that exceeds native-parentage blacks and matches that of white men.

Rates of return from investments in schooling are higher for the four minority groups with high levels of schooling than for the less schooled minorities. The statistic in Column 4 of Table 12.1 is the partial effect of schooling on earnings in a semi-logarithmic earnings function. Under some simple conditions, this partial regression coefficient is an estimate of the rate of return from schooling (see Becker and Chiswick (1966) or Mincer (1974)). Although the correlation is not perfect, groups with higher levels of schooling tend to have higher rates of return. In the 1970 Census data, groups with more than 11.5 years of schooling have schooling coefficients at least equal to 6.5 percent, while groups with less than 11.5 years of schooling have coefficients that are less than 6.0 percent. The positive correlation between schooling level and the measure of the rate of return from schooling is even more striking for subgroups within the three broad racial categories – white, black, and Asian.⁴

²The data are limited to the native-born because the analysis is concerned with the socioeconomic adjustment in the United States of racial and ethnic groups and seeks to avoid confounding these patterns with the selection criteria of recent U. S. immigration policy. In addition, analyses of earnings for women are far more complex than for men because of the effects on interrupted work histories of child care activities, marital stability, and spouse's income.

For the purpose of this analysis the 1970 Census is superior to the 1980 Census. Because the 1980 Census did not ask parental nativity or mother tongue, Jews and foreign-parentage blacks cannot be separately identified. Moreover, there is some evidence of a recent rise in rates of return from schooling for blacks as a result of affirmative action programs temporarily increasing the labor market demand for high-skilled relative to low-skilled blacks (see Smith and Welch (1986, pp. 85–95)). In addition, the 72 percent increase in the number of persons classified as American Indians from the 1970 to the 1980 census suggests a lack of comparability across these censuses. This change in the self-reporting of race has a small impact on the number of whites but a large impact on the number and characteristics of American Indians.

³Jews are defined as second-generation Americans raised in a home in which Yiddish, Hebrew, or Ladino was spoken either in addition to or instead of English (see Chiswick (1983b) and Kobrin (1983)). Similar patterns emerge in other data in which Jews can be identified by a question on religion (Chiswick 1985).

⁴It is particularly noteworthy that American Jews have a substantially (and significantly) higher coefficient of schooling than white non-Jews. The Jewish coefficient is larger even when there is a statistical control for occupation, including separate variables for high paying professional occupations (Chiswick 1983b). Tomes (1982) found a similar pattern for Canadian Jews. The ranking persists even when schooling is treated as a nonlinear variable. See, for example, Chiswick (1985).

Table 12.1 Earnings, schooling, and other characteristics of adult native-born men by Race and ethnic group, 1970^a

Race and ethnic group	Earnings (1969)	Age (years)	Schooling (years)	Rate of return to schooling ^b	Sample size ^c
	(1)	(2)	(3)	(4)	(5)
<i>White</i>					
<i>All</i>	9653	42.7	11.9	0.070 (0.0013)	33,878
Native-born parents	9441	41.7	11.9	0.069 (0.0015)	27,512
Foreign-born parents	10,567	47.1	11.9	0.073 (0.0008)	6366
Jewish ^d	16,176	49.2	14.0	0.080 (0.0042)	3719
Non-Jewish ^d	10,431	47.2	11.7	0.068 (0.0010)	57,351
<i>Mexican origin</i> ^e	6638	39.5	8.9	0.051 (0.0029)	5197
<i>Black (Urban)</i>					
<i>All</i>	6126	42.0	9.9	0.044 (0.0013)	26,413
Native-born parents	6110	42.0	9.9	0.044 (0.0013)	26,137
Foreign-born parents	7719	39.0	11.8	0.068 (0.0145)	276
<i>Japanese</i>	10,272	43.4	12.7	0.065 (0.0050)	2063
<i>Chinese</i>	10,406	41.4	13.1	0.067 (0.0078)	627
<i>Filipino</i>	7173	37.3	11.3	0.045 (0.0118)	335
<i>American-Indian</i> ^f	5593	40.0	9.9	0.054 (0.0048)	1894

Source: The data are from the 1970 Census of Population, 5 percent and 15 percent questionnaires. For a discussion of the data and the regression equations, see Chiswick (1980, Chs. 4, 6, and 7, 1982, 1983a, 1983b)

^aThe data are for men aged 25–64 in 1970 who worked and had nonzero earnings in 1969. Earnings are defined as wage, salary, and self-employment income. The earnings, schooling, and age data are means. The Asian data exclude men in the Armed Forces in 1970; the Jewish/non-Jewish data exclude persons enrolled in school

^bCoefficient of schooling from the linear regression of the natural logarithm of earnings in 1969 on schooling, experience, experience squared, marital status dummy variable, geographic distribution, and weeks worked. Geographic distribution is urban/rural and South/Non-South, except for the Asian analysis in which it is urban/rural and Hawaii/California/South/Other Non-South. The standard error of the regression coefficient is in parentheses

(continued)

Table 12.1 (continued)

^cThe sampling fractions are 1/1000 for white men, 1/100 for the Mexican, Jewish/Non-Jewish, and black men, and 2/100 for Asian and American Indian men

^dThe Jewish/Non-Jewish data are for native-born men of foreign parentage (one or both parents foreign born), where Jews are defined as those reporting Yiddish, Hebrew, or Ladino as their mother tongue (language other than or in addition to English spoken in the home when the respondent was a child)

^eWhite men identified as of Mexican origin in the Hispanic origin question. Over 95 percent of the Mexican origin population was classified as white in the 1970 Census.

^fExcludes men living in Alaska

This broader perspective on the racial and ethnic composition of the population suggests that the public policy and research questions relevant for the black-white comparison are more complex than has been realized. U.S.-born Jews, Chinese, Japanese, and foreign-parentage blacks in these age cohorts have experienced discrimination in access to higher education and in the labor market. In addition, the Japanese in the Pacific Coast states experienced the disruptions in their schooling and labor market experience arising from the World War II internment. Yet, these groups have achieved a high degree of labor market success, while other groups experiencing discrimination did not.

Much of the race and ethnic studies literature focuses on group-specific models and hypotheses, and it may be that a separate story is needed for each group. An alternative approach, however, is adopted in this study. A model is developed below (Part IV) that can explain the different patterns of success with a minimum of ad hoc reasoning.

Testing Alternative Hypotheses

This section presents tests of alternative hypotheses as to why racial and ethnic groups differ in their levels of educational investment. The hypotheses include different “tastes” for schooling, different time preferences, the diaspora effect, discrimination, and differential investment productivity. The tests are done using a model of the investment decision based on the individual’s supply and demand for funds for investment in education.

A. Supply and Demand for Funds for Investment

Regardless of the race or ethnic group, a person can be thought of as making decisions on the optimal level of investment of resources in schooling, including time and out-of-pocket expenses. The supply of investment funds relates the marginal interest cost to the level of the investment. The demand for investment funds relates the marginal rate of return to the level of the investment. Optimality for the individual occurs when the marginal interest cost of funds equals the marginal rate of return.⁵

⁵This framework first appeared in Becker and Chiswick (1966) and was developed more fully in Becker (1967).

The supply curve of investment funds is the marginal interest cost of obtaining funds for investment, including the psychic cost of self-financing investments through lower consumption (see Hirshleifer 1958).⁶ It is upward rising if cheaper sources of funds are used before more expensive sources, as would occur, for example, if federally subsidized student loans were used before taking out a second mortgage on the family house. The supply curve is lower, and thus farther to the right (greater funds supplied for the same interest cost of funds), for those who have access to cheaper sources of funds. The supply curve would be lower, for example, for the more wealthy who can self-finance the investment than it would be for those who borrow funds from the capital market (Caplovitz 1963).

The demand curve for investment funds depends on the marginal rate of return on investments in schooling. It is drawn downward sloping under the assumption that beyond some point additional investments command a lower return (see Ben-Porath 1967). This arises in part because eventually schooling raises productivity in the labor market by more than it raises productivity in acquiring more schooling. The demand curve is higher the greater the rate of return on the investment, that is, the greater the benefits from schooling and the lower the cost of acquiring a year of schooling. As a result, the demand curve for funds for investment in schooling is higher for those with greater ability – either innate ability or ability created by greater home-produced human capital. Optimal investment occurs when the marginal interest cost of funds equals the marginal rate of return on the investment.

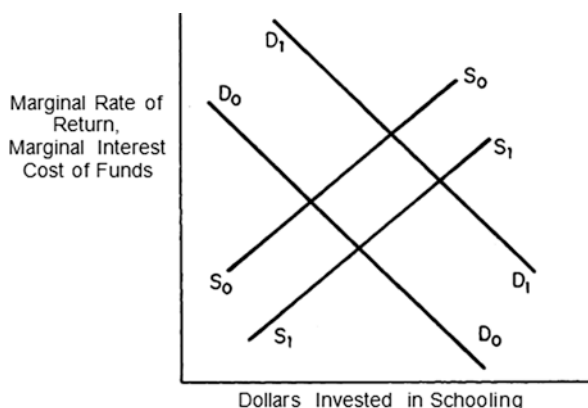
Group differences in investment in schooling may arise from differences in demand conditions, from differences in supply conditions, or from a combination of the two. If demand conditions vary more than supply conditions (e.g., demand curves D_0D_0 and D_1D_1 and supply curve S_0S_0 in Fig. 12.1), groups with higher levels of schooling would tend to have higher rates of return. If supply conditions vary more than demand conditions (e.g., demand curve D_0D_0 and supply curves S_0S_0 and S_1S_1 in Fig. 12.1), groups with greater investments would tend to have lower rates of return. Hence, an examination of group differences in schooling levels and rates of return from schooling can provide some insight on whether supply curves or demand curves vary more across race and ethnic groups.

B. Differences in Supply Conditions

It is often said that the high level of schooling of the Chinese, Japanese, Jews, and foreign-parentage blacks arises from a greater preference or “taste” for schooling or from a higher value placed on future consumption compared with current consumption. By implication, the groups with lower levels of schooling do not have such preferences for schooling or do not place as high a current value on future outcomes.

⁶For two recent attempts at estimating individual rates of time preference, an important determinant of the supply curve, see Fuchs (1982) and Viscusi and Moore (1989).

Fig. 12.1 Schematic representation of supply and demand for funds for investment in schooling



To be other than tautological, a mechanism must be described through which these “taste” factors operate. If there is a “taste” for schooling, perhaps determined by cultural, historical, or other factors, part of the returns are in the form of consumption benefits rather than pecuniary income. Thus, even if the pecuniary benefits and costs of schooling are the same, groups for whom nonmoney consumption benefits are important will be willing to invest more funds at any given interest cost. Similarly, groups with a lower time preference for current consumption will supply funds at a lower interest cost. Thus, these two hypotheses imply a supply of funds schedule that is farther to the right for the Chinese, Japanese, Jews, and foreign-parentage blacks. Then, if demand conditions do not vary across groups, these four groups would have the observed high levels of schooling. They would, however, also be expected to have lower rates of return from schooling.

A variant of the “taste” hypothesis often applied to Jews is the so-called “diaspora” hypothesis. A population that feels insecure in its present residence, either for current or historical reasons, would prefer investments in portable and transferable assets. Portable means that the assets can be easily moved from place to place, and transferable means that the assets are nearly equally productive in all locations. To the extent that human capital is more portable and transferable than other forms of capital, a diaspora population, always fearful of another uprooting, would attach a larger implicit risk premium on nonhuman capital.⁷ The result would be a greater supply of funds for human capital investment and a smaller supply of funds for less portable or less transferable investments (e.g., land or plant and equipment). While this implies a higher level of schooling, it also implies a lower rate of return on the investment in schooling.

The empirical relationship between the level of schooling and rates of return suggests that group differences in the supply curve for investment funds vary less than

⁷ It should be noted that many types of human capital have little transferability. For a more detailed discussion of the diaspora hypothesis with regard to American Jews, see Chiswick (1985).

group differences in the demand curve.⁸ The simple versions of the taste for schooling, discount rate, and diaspora hypotheses are therefore not consistent with the data.

C. Discrimination

Group differences in demand conditions may arise from discrimination in access to schooling, in the quality of schooling and in the labor market. Discrimination in access to and quality of schooling will lower schooling levels, rates of returns from schooling, and earnings. Discrimination in the labor market will generally lower rates of return from schooling and earnings. Even if labor market discrimination is neutral with respect to skill (i.e., it results in the same percentage fall in earnings for all levels of schooling), the rate of return is lowered.⁹ Discrimination in access to schooling and in the labor market is the usual explanation for the lower measured rates of return from schooling received by blacks (Smith and Welch 1986).

Although the discrimination hypothesis is consistent with the observation that schooling levels and rates of return from schooling are lower for some minority groups than for whites, it is not consistent with the observation that for other minority groups they are the same or greater than the white magnitudes.

D. Productivity of Schooling

An alternative hypothesis considers group differences in the productivity of schooling. Conceptually, this can arise from greater efficiency in acquiring units of skill from a given amount of schooling or from being more efficient in applying these skills in the labor market.¹⁰ It is important to emphasize that group differences in the productivity of schooling are consistent with all racial and ethnic groups having the same distribution of genetically determined ability. Rather, differences in productivity may arise from differences in out-of-school human capital formation (prior to or concurrent with schooling), and tradeoffs that influence the quality of schooling demanded by members of the group.

If group differences in the productivity of schooling vary by more than group differences in the supply of investment funds, a positive relation would appear between levels of schooling and rates of return from schooling. This approach is consistent with not only the observation that some minority groups have low levels of schooling and rates of return, but also that some others have high values for both

⁸ It is assumed that the rankings of average and marginal rates of return are the same across groups.

⁹ This arises so long as the private direct (out-of-pocket) costs of schooling do not decline with discrimination.

¹⁰ Skill need not be viewed as homogeneous. A useful distinction (see Schultz, 1975) is between "worker skills" (efficiency in performing a task) and "allocative skills" (efficiency in decision making). Groups may differ in the proportions of worker and allocative efficiency of their skills. If so, since allocative skills command a higher payoff during periods of greater disequilibrium in the economy (e.g., when there is a more rapid rate of economic change), group differences in rates of return from schooling could be a function of the state of the economy.

schooling and its rate of return. Indeed, although the hypotheses discussed in this section are not mutually exclusive, the schooling-productivity hypothesis is the only one that is generally consistent with the observed pattern.

Fertility and Child Quality: The Model

Suppose that there are two racial or ethnic groups, A and B, which do not intermarry. In Generation I the two groups are assumed to be alike in most respects, including number of individuals and level of utility. The two groups differ only in the price of quantity relative to the price of quality of children.¹¹ To take an extreme example, Group A is urbanized (higher cost of space, poorer job opportunities for children, better job opportunities for women), the women are educated (high value of time for child care providers), and there are no psychic or other costs associated with fertility control.¹² For Group B all of these conditions are just the opposite.

Although the two groups are equally wealthy in Generation I, Group A has a higher cost of quantity relative to quality of children than Group B. Group A couples have fewer children and invest more in each child (although perhaps less in total) than Group B.¹³ Because of the complementarity of various types of human capital, greater home-produced "child quality" in Group A would be expected to

¹¹The economic approach to the analysis of the quantity and quality of children is most richly developed in Becker (1981), especially Chaps. 6 and 7.

¹²Group differences in the value of time of women may arise from differences in schooling or in location. Cardwell and Rosenzweig (1980), for example, show that the earnings of women relative to men varies systematically with the industrial structure of the metropolitan area. Relative earnings are lower in metropolitan areas that have more male-intensive industrial structures.

A higher cost of fertility control results in more children per family, which in turn implies a greater cost of raising average child quality. Hence, the cost of fertility control affects the relative price of quantity and quality of children.

¹³Among other effects, a larger number of siblings would result in greater time spent interacting with other children rather than with adults (parents). This apparently has adverse effects on average child quality. See Zajonc (1976) for an interesting theoretical time allocation model. See Blake (1987) for both a survey of the literature and a statistical analysis of the inverse relation between performance on standardized tests and the number of siblings. Blake finds the inverse relation is much stronger for verbal ability, which is more dependent on child-parent interaction, than on nonverbal ability. Blake also found that relatively few of the most able children were from large families, despite the obvious fact that large families produce a disproportionate share of children.

If the greater number of children in Group B were to arise from fewer couples remaining childless (i.e., there are more one-child families), it is possible for average child quality in Group B to exceed that in Group A. For an analysis of the relation between fertility rates and the average number of siblings per child, see Preston (1976).

raise the productivity of, and hence the rate of return from, schooling.¹⁴ Thus, higher child quality would appear as a higher marginal rate of return (or demand) schedule in Fig. 12.1. As a result, in Generation II, Group B is more numerous. However, the adult members of Group A have higher average skill levels, higher rates of return from schooling, and higher earnings.

Moreover, the same relative price effects that influenced their parents would encourage the second generation of Group A to have lower fertility than Group B and make greater investments in quality per child.¹⁵ Thus, by the third generation each member of Group B has more siblings and cousins than those in Group A, but a lower level of human capital, a lower return on schooling investments, and lower earnings, and so on for successive generations.

There is, however, an additional consideration. The differences in the skills and earnings between Groups A and B in the second generation imply a positive income effect on fertility. As with most “consumer durables,” the income elasticity of demand for quality of children is likely to be much higher than the income elasticity of demand for quantity of children. Perhaps unlike other consumer durables, however, parents generally try to invest equally in all their children.¹⁶ The wealth effect thus implies that the marginal cost of an extra child is greater for higher income parents (Becker and Lewis 1973). This higher price of quantity tends to reduce the number of children, offsetting part or all of the favorable effects of higher income (i.e., the pure income effect) on the number of children. To the extent that there are fewer children, increasing child quality is less expensive.

As a consequence of initial exogenous price differences between Group A and Group B, the quantity-quality fertility model generates group differences in fertility, skill formation, rates of return, and earnings; and these differences are transmitted from generation to generation. However, these differences need not increase indefinitely. Some of the variables that are exogenous in one generation may be endogenous over a longer period of time, such as religious practice (see, for example, Newport (1979) and Iannaccone (1988)). Other factors may also be operative. For example, in the Easterlin fertility model a group’s fertility is positively related to its

¹⁴The complementarity of types of human capital does not detract from the observation that at the margin they are also substitutes. That is, at the margin more of one type of human capital (e.g., higher quality home-produced human capital) can offset deficiencies in other types of human capital (e.g., low quality of formal schooling).

¹⁵If the relative price difference in Generation I arose from the higher value of time of the mothers in Group A due to a higher schooling level, the quantity-quality fertility decisions will result in their daughters also having a higher value of time. Other determinants of relative prices, such as geographic location and psychic costs of fertility control, may change only slowly from generation to generation.

¹⁶There does not appear to be a literature on the distribution among children in the family of parental child care time or direct expenditures. Research on bequests, however, suggests that parents try to equalize their children’s wealth by making larger bequests to their children with less income. See Tomes (1982).

income relative to expectations based on the income of its parents’ generation. This model implies an intergenerational dampening in differences in fertility, and hence in income and schooling.

Application of the Child Quality Investment Model

The child quality investment model as applied to racial and ethnic groups suggests that fertility rates, female labor supply, and wealth in one generation are relevant variables for analyzing group outcomes in the next generation. Historical data on racial and ethnic minorities in the United States, other than blacks, are very scarce. This section pulls together data on these variables for the racial and ethnic groups considered in Table 12.1. In some instances contemporary data must be used. However, if group differences in relative prices do not vary sharply from generation to generation, contemporary patterns would be reflecting historic patterns.

A. Group Differences in Skill Levels Across Generations

Data are not readily available by race and ethnic group on the skills, as measured by income, education, or occupational attainment, of the parents of the current adult population. If it is assumed that there are 30 years from one generation to the next, the cohorts of adults in the United States in 1940 constitute the parent generation of the native-born adult cohorts in 1970.

Educational attainment data for males from the 1940 Census of Population (Table 12.2) can be compared with the educational attainment of U. S.-born members of the same race and ethnic group in the 1970 Census (Table 12.1) to discern intergenerational patterns. As would be expected, most groups with relatively high educational attainments in 1970 had parents with higher than average educational attainment. Relative to whites, the Japanese, and even foreign-origin blacks, had “high” levels of education in 1940 and 1970. On the other hand, American Indians

Table 12.2 Median years of schooling for males age 25 and over by Race, 1940

Race	Total	Native-born	Foreign-born
White	8.4	8.6	7.3
Black	5.3	5.4	7.6
Urban	6.5	5.5	7.7
Japanese	8.8	12.2	8.3
Chinese	5.6	6.3	5.3
Filipino	7.4	(a)	(a)
American Indian	5.7	5.7	(a)
All races	8.3	--	--

(a) The sample size for the foreign-born is too small for a comparison by nativity. Persons born in the Philippines were treated as native born in the 1940 Census tabulations

Source: U. S. Bureau of the Census (1943a), Table 6, p. 34; and U. S. Bureau of the Census (1943b), Table 31, p. 271

and native-born blacks had low levels in both periods. The relative position of Filipinos declined, while that of the Chinese showed a dramatic increase over the three decades. As will be shown below, in the United States the Chinese are a low fertility population, while the Filipinos have high fertility rates. These fertility patterns are consistent with the changes in relative educational attainments.

Data are not separately reported in the published volumes from the 1940 Census of Population for persons of Mexican origin. Data from the 1930 Census of Population, however, suggest that Mexican-Americans were much less wealthy than either the Chinese or Japanese.¹⁷

Since there was little Asian immigration from about 1907 until the 1960s, the ancestors of most adult U. S.-born Asian-Americans lived in this country at the turn of the century. Data from the 1900 Census of Population provide information on the impressive improvements in skills among the Chinese and Japanese. Among men age 18–64 in 1900, the Chinese and Japanese, primarily immigrants, had an occupational prestige score (11.8) similar to that of Mexican-Americans (10.9) and blacks (11.9). It was substantially and significantly lower than the score for all native-born white men (23.5) and foreign-born white men (19.7), who were primarily of European origin. Although the Chinese and Japanese had literacy rates (70 percent) that were higher than the Mexicans (56 percent) and blacks (61 percent), they were significantly lower than the literacy rates among native-born white men (96 percent) and foreign-born white men (90 percent). In the course of one or two generations, Americans of Chinese and Japanese ancestry evolved from a low-skilled population to one with higher levels of skill than the majority white population.

There are some data that permit a comparison of the skill level of turn-of-the-century Jewish immigrants with other European immigrants. The 1909 survey conducted by the Dillingham Immigration Commission (1911 report), records of the immigration authorities, and the 1900 and 1920 Censuses of Population are the major sources. The data suggest that the Jewish immigrants were of a higher level of skill (as defined by occupational status), had a higher literacy rate, and had higher earnings than other immigrants from Eastern and Southern Europe, but not in comparison with immigrants from Northwestern Europe or the native born (Carpenter 1927, pp. 283–92; Kahan 1978; Higgs 1971). American Jews have made considerable gains in their educational and occupational attainment relative to the native-born population (Chiswick 1985). It will be shown below that the fertility rate of American Jews is substantially below that of other whites.

¹⁷ An appendix to a published report from the 1930 Census provides comparative statistics on the value of owner-occupied homes and monthly rent for four “racial” minorities. The ranking of value of homes and rental payments were the same. In increasing order of value the groups were the Mexican-Americans, American Indians, Japanese, and Chinese, with a wide gap between the first two and the last two. (U. S. Bureau of the Census 1933, pp. 5–6 and Table 29, p. 201).

These patterns point to the importance of the intergenerational transmission of wealth in the form of income, schooling, or occupational status.¹⁸ They also suggest that there are changes in relative skill levels from generation to generation. The observed changes in relative skill levels are consistent with the observed patterns of fertility.

B. Group Differences in Fertility

To determine whether group differences in educational attainment are consistent with a quantity-quality tradeoff model, it would be desirable to have data on the mean number of siblings by group for the current cohort of adults. These data are not available directly, but a useful proxy would be the fertility rate for the group at about the time the current cohort was born (Preston 1976). Although black-white fertility comparisons are abundant, historical data for other racial and ethnic groups are scarce. The data that can be used are instructive. They suggest that there was an inverse relationship between number of children and the average educational attainment of these children.

According to Rindfuss and Sweet, "There are two distinctly different age patterns of fertility. American Indians, Mexican Americans, blacks, and whites begin their childbearing early and reach their peak level of fertility by their early twenties. Among these four groups, blacks have an earlier pattern than the other three. The Chinese-Americans and the Japanese-Americans, on the other hand, begin their childbearing substantially later and do not reach their peak level of childbearing until their late twenties" (Rindfuss and Sweet 1977, p. 145). The later age of childbearing among the Chinese and Japanese women is related to a later age at first marriage (U. S. Bureau of the Census 1973, Tables 1, 5 and 10).

A later age at first marriage for women is associated empirically with higher levels of schooling, including more schooling acquired after marriage (Alexander and Reilly 1981).¹⁹ Hence, a later age at first marriage should be associated with her having fewer children, in part because of a reduced period of exposure to childbearing and in part because of the implications of delayed marriage for the women's own schooling attainment. The lower fertility implies higher average child quality.

¹⁸ This is consistent with the finding among whites of an inverse relation between parental ability and the number of children born. The negative effect is stronger (i.e., larger and more highly statistically significant) for the measures of mother's ability than it is for father's ability. For a recent study see Rutherford and Sewell (1988) and the references therein.

Solon (1989) shows that the small intergenerational correlation coefficients usually observed using micro data arise from measurement error and the homogeneity of the populations under study. By implication, larger correlation coefficients would be observed across heterogeneous groups.

¹⁹ Using data from the National Longitudinal Survey Youth Sample, Michael and Tuma (1985) find that among white, black, and Hispanic young women, a later age of entry into motherhood is associated with having been raised in an intact family (i.e., with both parents) and with fewer siblings. The implication is that greater investment in a daughter results in later age for the start of her own childbearing.

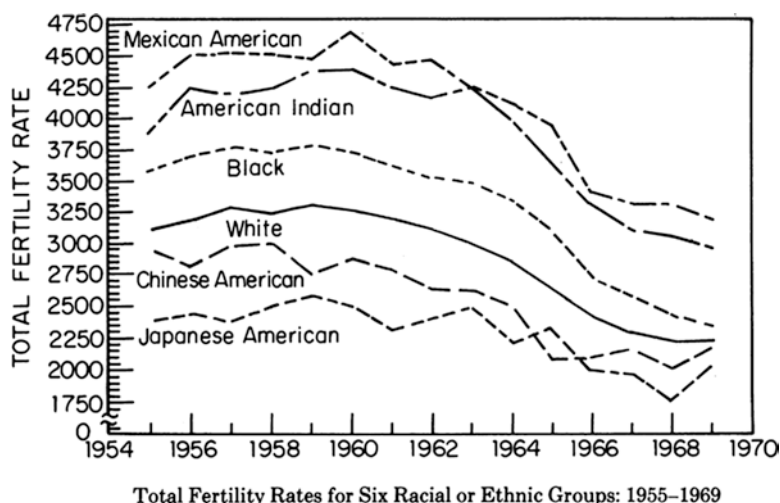


Fig. 12.2 Total fertility rates for six racial or ethnic groups: 1955–1969

Source: Rindfuss and Sweet [1977], p. 90

(Note. The total fertility rate is the number of births that one thousand women would have in their lifetime if, at each year of age, they experienced the birth rates occurring in the specified year.)

Figure 12.2 shows total fertility rates by year for 1955 to 1969 for six race and ethnic groups.²⁰ Although earlier fertility data would be more desirable, they apparently do not exist. Note that the fertility rates in Fig. 12.2 are virtually the inverse of the level of schooling. In descending order, Mexican-Americans, American Indians, and blacks have higher fertility rates than whites, whereas the Chinese and especially the Japanese have lower fertility rates.²¹ The group differences in fertility rates in the mid-1950s varied by age. Among young women (ages 19–24 years) the

²⁰There is a debate in the literature as to whether race and ethnic differences in fertility can be explained solely by differences in characteristics or whether there is an independent effect of minority group status. The advocates of the latter approach have various hypotheses, some of which imply a positive minority status differential and some of which imply a negative differential. See Bean and Marcum (1978), and the exchange by Rindfuss (1980); Johnson (1980); Johnson and Nishida (1980); Marcum (1980); and Lopez and Sabagh (1980), and the references therein. For a recent discussion of these issues focusing on Mexican-Americans and blacks, see Bean and Swicegood (1985, Ch. 7).

²¹For the period 1957–1959, the ratios of the group fertility rate to the white fertility rate were as follows.

Chinese	0.89	Mexican-American	1.37
Japanese	0.76	American Indian	1.30
		Black	1.15

These data are from Rindfuss and Sweet (1977), p. 93. In addition, using census data, Chamnivickorn (1988) found that Filipino women had fertility rates higher than white women.

Japanese and Chinese had much lower fertility rates than whites and much lower rates than the three high fertility groups. Among older women (age 30–44 years) the ranking is the same but the differences are smaller (Rindfuss and Sweet 1977, p. 92).²²

Analysis of Jewish/non-Jewish fertility differences over the past century suggest a consistent pattern of lower fertility among Jews in the United States, Canada, Eastern Europe, and Western Europe, even when the analysis is limited to those living in urban areas (Goldscheider 1967).²³ A study of contraceptive practices in the United States during the 1930s “indicates that a higher proportion of Jews used contraceptives, planned their pregnancies, used more efficient methods of birth control, and began the use of contraception earlier in marriage than Protestants and Catholics” (Goldscheider 1967, p. 198). A survey conducted in 1957 indicates substantial lower fertility among American Jewish women than all women, even among the older cohort.²⁴

Fertility patterns translate into differences in educational attainment in the next generation. Although there has been much research on this issue for whites, recent research shows similar patterns for other racial and ethnic groups. Mare and Winship (1988), for example, analyzed the determinants of school attainment among adult men for seven racial and ethnic groups (white, black, Asian, American Indian, Cuban, Mexican, and Puerto Rican). Controlling for parental schooling and father’s occupation, the number of siblings had a consistently significant negative effect on various measures of educational attainment, except among the Asians. One has less confidence in their Asian analysis, however, because of the absence of statistical

²² In the late nineteenth and early twentieth centuries Japan and China had very different fertility rates. Nakamura and Miyamoto (1982) show that the Japanese attained a high degree of fertility control in the “premodern” period, while the Chinese maintained high fertility rates. They attribute the divergent pattern, in part, to differences in the family systems, a hierarchical feudal system based on nonpartible inheritance in Japan and a more egalitarian system based on partible inheritance in China. In the United States, however, the Chinese and Japanese are both low fertility populations.

²³ Becker (1981, p. 110), citing different studies, reports that “the Jewish birth rate was 47 percent below the average birth rate in Florence at the beginning of the nineteenth century; Jewish marital fertility was 20 percent below Catholic fertility in Munich in 1875.”

²⁴ The number of children ever born per 1000 women, 1957:

Religion	Age 15–44 years ^a	Ever married	Age 45 years and older
	All		
Jewish	1184	1598	2218
All women	1677	2188	2798
All women-urban	1504	2009	

^a standardized by age.
The data are from U.S. Bureau of the Census, n.d., Table 10, and U.S. Bureau of the Census, 1958b, Table 40, p. 41. Jewish women also have a later median age of first marriage; 21.3 years compared with 20.3 for all women (U. S. Bureau of the Census, n.d., Note to Table 5). In this 1957 survey religion was self-reported. See U.S. Bureau of the Census, 1958a.

control for type of Asian origin, nativity, and duration of residence in the United States. These factors would tend to confound the analysis for Asians by more than for other groups.

C. Group Differences in Labor Force Participation of Mothers

For the same level of fertility, a higher female labor force participation rate implies greater family money income but less parental time with children. Both greater family money income and more parental time with children would be expected to result in higher quality children. The net impact on child quality of the tradeoff of money for mother's time is not clear a priori.²⁵ Mother's time in child care would generally be most productive in raising child quality during the preschool and schooling years when children are "time intensive."²⁶ However, when the children become young adults (i.e., post-high school) they are "goods intensive" and mother's time may be most productive if she engages in market work and uses the earnings to purchase market inputs for the children. These market inputs in the human capital of young adult children include tuition and room and board at college, world travel, food and shelter while obtaining on-the-job training, etc.

Several studies compare racial and ethnic groups as to the effect of the presence of children in the home on female labor supply, both overall and when other variables, including schooling and other family income, are held constant. The detailed regression coefficients are reported in the Appendix. Although these studies use contemporary data, the estimated regression coefficients may be reflecting more fundamental differences in relative prices that do not vary across generations within a group.

Four studies of black-white differences in female labor supply are noteworthy. Bell (1974) used the Survey of Economic Opportunity, Sweet (1973, pp. 82–87 and 96–103) the 1960 Census of Population, Lehrer and Nerlove (1981) the 1973 National Sample of Family Growth, and Reimers (1985) the 1976 Survey of Income and Education. All four studies find a greater labor supply by black women and a smaller depressing effect of the presence of young children on their labor supply.

Reimers (1985) also reports a reduced-form employment equation for Mexican-origin women. She finds a smaller depressing effect of children under age 12 on

²⁵ Imperfect substitutes for parental time can, to some extent, be purchased in the marketplace.

²⁶ For analyses of time inputs in child care by mothers and the effects of home investments on the children's achievements, see Leibowitz (1974a, 1974b), Gronau (1976), Hill and Stafford (1974, 1980), Hunt and Kiker (1981), and Datcher-Loury (1988). These studies find that time devoted to child care, particularly educational care such as playing, reading, and talking, rises with the level of parental education. The increase is greater for mother's schooling than for the father's schooling. Studies have also found that greater parental time inputs (measured by mother's labor supply, marital status as a proxy for one- or two-parent households, and number of siblings), raise the performance on standardized tests, school enrollment, school attainment, and earnings of the child. See, for example, Blake (1987), Datcher-Loury (1988), Fleisher (1977), Krein (1986), and Stafford (1985). Unfortunately, time budget surveys and longitudinal data files have sample sizes that are far too small for studies of racial and ethnic group differences in the determinants of child quality.

labor supply for Mexican-origin than for non-Hispanic white women, and the difference is larger the younger the age of the children. There is no differential effect for children age 12–17.

A smaller depressing effect of children on female labor supply is not a universal characteristic of minority groups. A study of white women using 1970 Census data examined Jewish compared to non-Jewish differences in labor supply, overall and when other variables are the same (Chiswick 1986). Children under age 18 have a greater depressing effect on labor supply for Jewish women. As a consequence, Jewish women with children at home are less likely to work than non-Jewish women, and the difference is greater the younger the children. Among working women with school-age children, the Jewish women are more likely to work part time and part year. However, Jewish women without children at home (no children under 18 years) have a greater labor supply than non-Jewish women when other variables are the same.

In a study of Asian-American women, using 1970 Census and 1980 Census data, Chamnivickorn (1988) shows that other things the same, Filipino women have a greater labor supply than Chinese and Japanese women. The presence of children under age six in the home has a smaller depressing effect on labor supply for the Filipino women. There are no differences among the Asian groups in the effect on female labor supply of children age 6–18.

D. Group Differences in Intergenerational Transfers

Two studies have examined racial and ethnic group differences in private income transfers (in cash or in kind) received by young adults from other family members, primarily their parents. These transfers can be viewed as a mechanism through which parents can increase the schooling and on-the-job training, and hence the “child quality,” of their goods-intensive young adult offspring. Greater transfers from parents to young adult children appear to be made the higher the group’s average rate of return on education. That is, greater parental investments in young adult children are made by the same groups that make greater investments in younger children.

Other things the same, blacks and Hispanics receive smaller private transfers than whites, and the differences are greater for young adult than for older children (Chiswick and Cox 1988). Among white college students, controlling for scholarships, fellowships, and family income, among other variables, Jewish students receive more parental financial support than non-Jewish students (Catsiapis and Robinson 1981).

Summary and Conclusion

This paper has been concerned with racial and ethnic group differences in schooling, earnings, and rates of return from schooling among the native-born population of the United States. The sharp differences in these variables are not easily explained

by appealing to discrimination against minorities. Some minorities that have experienced discrimination have high levels of schooling, earnings and rates of return (e.g., Chinese, Japanese, Jews, and foreign-parentage blacks), while others have low levels (e.g., native parentage blacks, Mexican-Americans, American Indians, Filipinos). This does not mean that discrimination in access to schooling and in the labor market has not played a role. What it does imply is that other factors, operating separately or interacting with discrimination, are also relevant and appear to be the dominant explanation.

The ethnic studies literature frequently includes two simple “taste” hypotheses: one is that the more highly educated minorities have a cultural taste or preference for schooling; the other is that they place a higher value on future relative to present consumption (lower discount rate). These hypotheses imply a negative relation between schooling level and rates of return from schooling. Empirically, however, there tends to be a positive relation between the level of schooling and the rate of return from schooling across the race and ethnic groups. These hypotheses are therefore not consistent with the data.

The data suggest that group variations in the rate of return schedules from schooling are greater than variations in the interest cost of funds schedules. Group variations in rates of return arise from differences in the ability to convert the schooling process into earnings. These differences may be a consequence of parental investments (implicit and explicit) in the home-produced components of child quality. Although it is difficult to obtain the most appropriate data for a rigorous testing of the hypotheses, it does appear that members of the more successful groups had parents with higher levels of schooling, had fewer siblings to compete with for parental time and other family resources, and had mothers who were less likely to work when young children were in the household.

A positive relationship between educational attainments across generations reflects the intergenerational transmission of human wealth. There have, however, been some changes. During the past few decades the relative educational level has been rising for three low fertility groups, the Chinese, Japanese, and Jews, and declining for a high fertility group, the Filipinos.

The inverse relation between schooling attainment and family size implies a tradeoff of quality for quantity of children. The tradeoff may arise from differences in relative prices. Children are more expensive the higher the average child quality that is demanded, the higher the value of time of women in the labor market, and the higher the out-of-pocket cost of children. Therefore, groups with more highly educated women and living disproportionately in major metropolitan areas (e.g., Jews, Chinese, Japanese, and foreign-born blacks) may have substituted quality for quantity of children. Price differences may also arise from the fundamental differences that serve to define ethnic groups. For example, groups with religious beliefs that raise the psychic cost of fertility control (e.g., Mexican-Americans and Filipinos) have a larger number of children, and as a consequence make smaller investments of parental time and other resources per child.

Mothers' time may be used in providing child care or in generating money income in the labor market. Both activities may generate higher child quality. Greater time investments in child care during the preschool and schooling years when children are "time intensive" and greater market work during later years when children are "goods intensive" would appear to be optimal. Empirically, the data suggest that among the more successful groups women with children at home tend to have lower labor force participation rates, even after controlling for their higher level of education and husband's income, and fewer children. Perhaps more important, however, the relative difference in participation rates is greater when there are young children present in the home. They appear to have higher participation rates when there are no children at home. In addition, they tend to make larger private transfers to their young adult children.

If race and ethnic group differences in educational attainment and earnings are to a considerable extent a consequence of family decision making, rather than a consequence of direct discrimination in the educational system or in the labor market, group differences in educational attainment and earnings are likely to be more intractable than has been believed. One way that public policy can influence the quantity-quality tradeoff is by reducing the cost of birth control. Other public policies have more ambiguous effects. Income transfer programs (welfare) raise family income, but they do so in proportion to the number of children. Greater public expenditures per pupil in school also subsidize the number of children. The subsidization of the number of children may be an unavoidable consequence of attempts to improve child quality.

This study demonstrates that ad hoc group-specific explanations may not be necessary or even fruitful for understanding the schooling and earnings of the many racial and ethnic groups that comprise the American population. Instead, a relatively simple model in which there are group differences in the relative prices of quantity and quality of children may explain the fertility, human capital investments, and labor market outcomes of these diverse groups. The model may explain differences at a moment in time, as well as changes in relative positions over time.

The hypotheses developed and tested in this paper must be viewed as preliminary. Much more needs to be learned about the quantity-quality tradeoff and why it appears to vary systematically across race and ethnic groups. In particular, more data and more studies of minority groups, particularly the understudied "successful" minorities, are needed. These studies should identify the determinants of group differences in the price of quantity relative to quality of children and measure the responsiveness of racial and ethnic groups to these price differences. Historical studies are needed to determine some of the roots of group differences in the level of economic welfare and how they have been transmitted from generation to generation over the past century. This information will play a crucial role in the development of more effective public policies to promote higher levels of schooling and home-produced human capital among members of disadvantaged minority groups.

This Appendix Reports the Partial Effects of the Presence of Children in the Home on Various Measures of Female Labor supply Focusing on Minority Groups

A. Black-White Comparison (Bell, 1974)

The partial regression coefficients (t-ratios in parentheses) are as shown in the following tabulation.

	Dependent variables and groups			
	Full-time participation		Part- or full-time participation	
Children	Black	White	Black	White
Children under age 4 (dummy variable)	-13.7 (-6.3)	-17.5 (-12.4)	-14.7 (-6.3)	-23.1 (-14.2)
Number of children Under age 18	-1.23 (-2.8)	-4.7 (13.7)	-1.9 (-4.1)	-3.6 (-9.5)

The control variables include the woman’s age, schooling, number of times married, location, other family income, and husband’s weeks not worked.

B. Mexican-Black-White Comparison (Reimers, 1985)

The dependent variable is labor force participation. The regression coefficients (standard errors in parentheses) are as shown in the following tabulation.

Children	White non-Hispanic	Mexican	Black non-Hispanic
Less than 6 years	-0.431 (0.029)	-0.318 (0.039)	-0.196 (0.026)
Age 6 to 11	-0.235 (0.023)	-0.064 (0.030)	-0.043 (0.018)
Age 12 to 17	-0.115 (0.018)	-0.116 (0.025)	-0.109 (0.015)

The control variables include the women’s age, education, nativity, marital status, and spouse’s age, education, and nativity, and other family income, among other variables. Most of the Mexican-origin women are native born.

C. Jewish-Non-Jewish Comparison (Chiswick, 1986)

The partial effects (t-ratios in parentheses) are as shown in the following tabulation.

	Dependent variables and groups					
	Labor force participation		Percent of weeks worked		Hours worked per week	
Children	Non-Jewish	Jewish	Non-Jewish	Jewish	Non-Jewish	Jewish
Under age 6	-0.138 (-34.8)	-0.264 (-11.5)	-0.117 (-33.7)	-0.197 (-9.6)	-4.598 (-31.4)	-6.913 (-8.3)
Age 6 to 18	-0.037 (-18.1)	-0.062 (-5.9)	-0.041 (-22.9)	-0.070 (-7.5)	-1.60 (-21.4)	-2.861 (-7.5)

The control variables include age, education, marital status, location, and other family income.

D. Japanese-Chinese-Filipino Comparison (Chamnivickorn, 1988)

With Japanese women serving as the benchmark, the partial differential effects (t-ratios in parentheses) are as shown in the following tabulation.

Race and Children	1970 Census			1980 Census		
	Labor	Weeks		Labor	Weeks	
	Force	Worked	Hours	Force	Worked	Hours
	Part.	(percent)	Worked	Part.	(percent)	Worked
<i>Chinese:</i>						
Under age 6	0.0804 (1.88)	0.0636 (1.60)	1.992 (1.11)	-0.0017 (-0.06)	0.0312 (-1.15)	-1.157 (-0.94)
Age 6-18	0.0026 (0.12)	0.0059 (0.28)	-0.119 (-0.13)	-0.0110 (-0.50)	-0.0191 (-0.88)	0.744 (0.75)
<i>Filipino:</i>						
Under age 6	0.1050 (2.36)	0.0689 (1.66)	1.853 (0.99)	0.0553 (1.91)	0.0526 (1.83)	4.877 (3.72)
Age 6-18	0.0066 (0.27)	0.0216 (0.95)	0.244 (0.236)	0.0118 (0.49)	0.0151 (0.63)	0.415 (0.38)

Pooled regressions for U.S.-born Chinese, Japanese, and Filipino women, also controlling for age, education, marital status, location, other family income, and number and age of children. Samples sizes are 1493 (1/100 sample) for the 1970 Census and 9894 (1/20 sample) for the 1980 Census.

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Chapter 13

A Method for Proxying a Respondent's Religious Background: An Application to School Choice Decisions



Barry R. Chiswick and Stella Koutroumanes Hofrenning

Introduction

In spite of the importance of religion in the social, demographic, and economic life of the population, very few microdata data sets for the United States ask the respondent's religion. The U.S. Bureau of the Census has never included a question on religion in the decennial censuses and asked religion only once in the Current Population Survey, in March 1957 (U.S. Bureau of the Census 1958, 1989). The First Amendment to the Constitution, prohibiting an "establishment of religion," has been interpreted as preventing the U.S. Census Bureau from asking any questions dealing with an individual's religious identification or belief (Kosmin and Lachman 1993, p. 2). Many other government and private surveys follow this example. This is unfortunate because studies that can address the issue, generally small, privately collected samples, often find substantial differences across groups defined by religion.

One issue for which religion is believed to be important is the determination of the choice between public and private (including parochial) schooling, and this issue is used as an example in this paper. Yet there are other economic and sociological issues for which an explicit incorporation of variables for religion in

This is a revision of the original article published in *Journal of Human Resources*, 34(1), Winter 1999, pp. 193–207. Co-authored with Stella Koutroumanes Hofrenning. I am responsible for the current version.

The authors appreciate comments received on an earlier draft from John Durkin, Evelyn Lehrer, and Paul W. Miller.

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B. R. Chiswick (ed.), *Jews at Work*, Studies of Jews in Society 2,
https://doi.org/10.1007/978-3-030-41243-2_13

census and survey data would be very useful. These include questions regarding skill formation (for example, schooling level and type), labor market attainment (for example, earnings, occupational status, employment), allocation of time (for example, labor supply at a point in time and over time), consumption patterns (for example, “leisure time” activities, purchased goods), class of worker (for example, self-employed), vital statistics (for example, fertility, abortion, mobility, morbidity, mortality), household structure (for example, marriage, divorce, remarriage, age for leaving home), and a host of other socioeconomic issues that appear to be influenced by religious preference, background, or orientation.¹

Most studies using decennial census and similar data without information on religion simply ignore the issue, thereby possibly creating omitted variables bias. Some studies use a Catholic variable based on the percentage of residents in the respondent’s state who were either born or had at least one parent born in countries with a large Catholic population (for example, Sonstelie 1979; Gemello and Osman 1984). This method is not applicable for parents born in the United States or where parental nativity is not known. Moreover, what is relevant is the religion of those who came to the United States, as distinct from the religion of those who remained in the origin country.²

Another approach has been to use data on the percentage Catholic (or percentage Catholic and percentage in smaller religions) in the respondent’s state or SMSA (see, for example, West and Palsson 1988, Long and Toma 1988, Gustman and Pidot 1973, and Clotfelter 1976). This is far too crude a measure, as will be shown below. Studies of American Jews have used Russian-origin and/or a Yiddish or Hebrew “mother tongue” as Jewish identifiers (see, for example, Rosenthal 1975; Kobrin 1983; Chiswick 1983, 1991; Neidert and Farley 1985; Lieberman and Waters 1988). Russian-origin misidentifies non-Jews of Russian origin and Jews of non-Russian origin. Although a Yiddish or Hebrew mother tongue may be a useful identifier for Central and Eastern European Jewish immigrants at the turn of the century, and perhaps their U.S.-born children, it would not identify most contemporary American Jews, whether native born or foreign born.

The religious proxy algorithm (RPA) presented in this chapter permits the calculation of a probability distribution of religion for the respondent in census or survey data based on the person’s reported ancestry.³ It is useful to any researcher wanting a measure of religious affiliation when only ethnicity or ancestry data are available.⁴

¹ See, for example, Becker (1981), Chiswick (1988), Gordis and Gary (1997), Greeley (1974), Greeley et al. (1976), Lieberman and Waters (1988), Nam et al. (1968), Sander (1995), and Tomes (1984).

² For example, although the majority of persons of Russian ancestry in the United States are Jewish, Jews were only a very small minority (less than 1 percent) of the population of the Soviet Union prior to the recent mass emigration (*American Jewish Year Book* 1988, p. 344).

³ Independent of this study, Lankford and Wyckoff (1992) also use the General Social Survey ancestry data to estimate the probability of being Catholic. They use this variable in their analysis of school choice, but without much discussion. Moreover, they do not use variables for other religion probabilities, do not show the implications of alternative approaches to identifying Catholics, or report the religion probabilities by ancestry.

⁴ Census Bureau coding procedures mask any ancestry response that would reveal the respondent’s current religion or religious ancestry.

The first section below describes the religion and ethnicity/ancestry variables in the General Social Survey (GSS) and the ancestry variables used in the decennial census since 1980. The next section describes a simple method for obtaining religious probabilities for respondents in the census from the religion and ethnicity/ancestry data in the GSS. The third section presents a prototype application of this algorithm using an analysis of the demand for public versus private schooling. The chapter closes with a summary and conclusion.

Description of Ancestry and Religion Variables

A. Census of Population

The ancestry data from the 1980 and 1990 decennial censuses are based on the response to the following question: "What is this person's ancestry or ethnic origin?" (see Appendix Table 13.4). It is an open-ended question, and those persons who thought of themselves as having more than one origin were free to write in their multiple ancestries. Any ancestry response that might reveal a person's religion is masked. For example, a response of French-Protestant would be recoded by the Census Bureau as merely French, while a single religious response (for example, Mormon) is not coded separately but is combined with other single-religion responses ("other responses (religious)," code 998).

The census records both the first and, if reported, the second ancestry listed by the respondent. If a response was in terms of a dual ancestry (for example, Irish and English), the person was assigned two codes, for Ancestry Variables 1 and 2. The list of ancestries contains over 400 categories in the Public Use Microdata Samples (PUMS) created from the 1980 and 1990 censuses. In addition, in the 1980 census, but not in the 1990 census, 17 triple-ancestry combinations most frequently reported are defined. For example, English-German-Irish is a common triple ancestry combination. If a person gave three responses in the 1980 census which were not among the 17 common triple ancestries, only the first two were coded.

B. General Social Survey

The GSS is a national probability sample of approximately 1500 adults taken nearly every year since 1972 by the National Opinion Research Center. The GSS includes information on a vast array of social, demographic, skill, and economic variables, including the person's self-reported ancestry. It asks the question: "From what countries or parts of the world did your ancestors come?" (see Appendix Table 13.4). The GSS records up to three responses in the order mentioned. In the case of multiple ancestries, it also asks respondents to identify the response to which they feel closest. This question, however, may cause problems for persons whose ethnicity is not code-terminous with a political nation (Lieberman and Waters 1988). The ethnicity variable is coded into 40 different categories, with "no response" a 41st category. The single or "closest" ancestry reported is used in this study, and the data from the various samples are pooled across time (1972–87) to increase the sample size.

Unlike the decennial census, the GSS asks the question: “In what religion were you raised?” Response categories are Protestant, Catholic, Jewish, some other religion, no religion, and no answer. Those who report Protestant are asked to specify their denomination. The religion in which the respondent was raised is not subject to the endogeneity with respect to current socioeconomic variables as would be current religion.

Methodology

This section describes a simple algorithm for obtaining a probability distribution of religion from census data on ancestry using the religion and ancestry data from the GSS. First, a cross-tabulation of the ancestry and religion data in the GSS provides a probability distribution of religion for each GSS ancestry group. That is, the cross-classification indicates the proportion of respondents of, say, German ancestry who fall into each of the six religion categories. The probability distributions of religion for the 41 ancestry groups identified in the GSS are reported in Table 13.1 for the major religious groups. For the major ancestry groups the sample sizes are generally quite large, resulting in small sampling errors. Only one group (Arabic) has fewer than 31 observations.

Second, subgroups are formed from the detailed census ancestry categories to match the GSS ancestry categories (see Appendix Table 13.5).

Third, the probability distributions of religion are assigned to the collapsed census ancestry codes. For example, a person of German ancestry in the census would be assigned a probability of 0.70 of being Protestant, 0.21 Catholic, 0.01 Jewish, 0.07 none, 0.01 other and no answer (Table 13.1). The sum of the values of the six religion variables equals 100 percent.

There are some complexities with multiple ancestries. Unlike the GSS, the census does not ask a respondent with multiple ancestries to identify the ancestry group with which the person is most closely associated. For example, in the 1980 census for the multiple ancestry English-German-Irish, there is no indication of the relative intensity of each component. A procedure is needed to handle dual and triple ancestry responses to obtain the religion probabilities. For dual ancestries it is assumed that the first ancestry listed is the more preferred and thus more relevant. For example, a person who is listed as Greek in Ancestry 1 is coded as Greek.

Assume that each person has a unique religious identity, which may include no religion, and that this religious identity is exogenous with respect to the dependent variable. Consider regression equations in which the right-hand side variables include religious identity, that is, they include a set of $N-1$ dichotomous variables, one for each of $N-1$ of the N religion categories. Then, for each person, each religion variable has the value of zero, except for the person’s own religion which has the value of unity. In the absence of data on the respondent’s religion, but with data on ancestry, the probability distribution of the person’s religion from the procedure described above replaces the 0, 1 values.⁵

⁵This procedure is, therefore, distinct from the instrumental variables (IV) technique in which a

Table 13.1 Cross-tabulation of Religion and Ancestry, General Social Survey (in percentages)

Ancestry	Protestant	Catholic	Jewish	None	Other	No answer ^(a)	Sample size
America	81.52	12.26	0.39	4.86	0.58	0.39	514
American Indian	81.12	10.40	0.48	7.04	0.64	0.32	625
Arabic	20.00	20.00	4.00	12.00	44.00	0.00	25
Austria	31.94	45.14	9.72	7.64	5.56	0.00	144
Belgium	19.35	80.65	0.00	0.00	0.00	0.00	31
Canada (French)	27.23	64.73	0.45	5.80	1.34	0.45	244
Canada (other)	48.89	42.96	0.00	6.67	0.00	1.48	135
China	33.33	11.90	0.00	38.10	16.67	0.00	42
Czechoslovakia	30.28	57.77	1.20	8.37	2.39	0.00	251
Denmark	80.54	10.07	0.00	8.72	0.00	0.67	149
England and Wales	82.76	8.54	0.40	7.39	0.79	0.12	2520
Finland	83.21	9.49	0.00	7.30	0.00	0.00	137
France	51.42	36.43	0.78	9.56	1.29	0.52	387
Germany	70.55	20.81	1.06	6.55	0.84	0.19	3205
Greece	27.27	12.73	5.45	1.82	52.73	0.00	55
Hungary	31.34	45.52	12.69	8.96	1.49	0.00	134
India	35.00	5.00	0.00	15.00	45.00	0.00	40
Ireland	55.31	37.05	0.34	6.63	0.48	0.19	2081
Italy	13.24	78.56	0.59	6.52	0.99	0.10	1012
Japan	40.48	9.52	4.76	28.57	16.67	0.00	42
Lithuania	4.35	71.01	14.49	8.70	1.45	0.00	69
Mexico	14.77	77.97	0.24	5.81	0.73	0.48	413
Netherlands	85.31	9.38	0.00	4.38	0.63	0.31	320
Norway	81.92	9.59	0.00	7.12	0.82	0.55	365
Other Spanish	26.32	65.79	1.32	6.58	0.00	0.00	76
Philippines	18.42	76.32	0.00	2.63	2.63	0.00	38
Poland	11.86	71.33	10.71	5.11	0.33	0.66	607
Portugal	15.56	80.00	0.00	4.44	0.00	0.00	45
Puerto Rico	23.45	70.34	0.69	4.14	1.38	0.00	145
Romania	22.58	25.81	41.94	6.45	3.23	0.00	31
Russia	11.50	14.63	54.70	12.20	6.97	0.00	287
Scotland	83.80	8.38	0.19	6.15	1.12	0.37	537
Spain	26.28	62.77	2.92	6.57	0.73	0.73	137
Sweden	84.74	7.48	0.00	7.48	0.31	0.00	321
Switzerland	79.78	14.61	0.00	3.37	2.25	0.00	89
West Indies (non-Spanish)	62.26	28.30	0.00	5.66	3.77	0.00	53
West Indies	78.26	17.39	0.00	4.35	0.00	0.00	46
Yugoslavia	8.00	60.00	0.00	13.33	18.67	0.00	75
Other	40.52	29.41	3.27	8.50	16.34	1.96	153
No answer	65.52	12.93	2.59	8.62	2.59	7.76	116
Total	61.16	27.91	2.14	6.80	1.68	0.31	17,210

Note: Row totals for religious groups may not add to 100.00 due to rounding

^(a)Includes "Don't Know" and "No Answer." Source: National Opinion Research Center (1987)

The data on the probabilities of religious affiliation are not direct measures of a person's religion. They reflect the characteristics of a group in which the individual is a member.⁶ As a result there is error relative to the true but unknown religion of the individual. The larger the sample used to generate the probabilities, the smaller the error in estimating the frequency distribution. Thus, using the data in Table 13.1, the sampling variability is smaller for those of German ancestry than for those of Japanese ancestry. The measurement error is also smaller the more homogeneous the religious affiliation of respondents from an ancestry group. If there are only two religions, A and B, the error is smaller if 99 percent of the respondents from an ancestry group are of religion A and 1 percent are of religion B than if 50 percent belong to each religion. Thus, the error is smaller (Table 13.1) for those of Netherland ancestry than for those of Romanian ancestry.

The probabilities assigned in Table 13.1 are now ready for any researcher to use and apply.⁷ Section “[Application of the Algorithm](#)” provides an example of such an application.

Application of the Algorithm

This section summarizes an application of the religion proxy algorithm in the school choice context. Chiswick and Koutroumanes (1996) developed an econometric model for the demand for private schooling which relies on the RPA to obtain religious information from census data. The model is based on the assumption that public schools are not perfect substitutes for private schools and that the type of school selected is influenced by price, income, religion, and other variables reflecting the family's perception of the costs and benefits of alternative modes of schooling. The model is estimated using data from the 1980 census on school-age (6–17 years old) children, augmented by data on private school tuition. The dependent variable for the demand equation is a dichotomous variable *SCHOOL*, which takes a value of zero for public schools and one for private schools. A probit analysis is used to estimate the determinants of the private/public school choice. The focus of this discussion will be on the religion variables. For a full discussion of the school choice model, see Chiswick and Koutroumanes (1996).

predicted value from a regression equation replaces the unknown value of an explanatory variable that is endogenous or measured with substantial error.

⁶A similar procedure is used by Dickens and Katz (1987) to develop a union density variable for a study of inter-industry wage differences and by Angrist and Krueger (1992) to develop an age at school entry variable for a study of the effects of compulsory schooling laws.

⁷More complex stratifications can be used, such as stratifying by level of schooling as well as by ancestry. Two problems arise, however. One is that cell size becomes smaller the larger the number of stratifications. The other is that one would not want to stratify by a variable that might be endogenous, such as education.

Table 13.2 List of variable in analysis of effect of religion on school choice ^b

Dependent variable:	Explanatory variables		Mean	Standard deviation
Income	<i>INCOME</i>	Family Income in 1979 (in thousands of dollars)	26.389	14.809
Tuition ^c	<i>PRICE</i>	Average tuition by grade level by state for private parochial and independent schools	2.655	718.0
Sex	<i>MALE</i> ^a	DV: male student	0.51	0.50
	<i>FEMALE</i>	DV: female student	0.49	0.50
Race	<i>WHITE</i> ^a	DV: white, non-Hispanic	0.831	0.375
Ethnicity	<i>BLACK</i>	DV: black, non-Hispanic	0.093	0.291
	<i>HISPANIC</i>	DV: Mexican, Puerto Rican, Cuban, or other Spanish Origin	0.076	0.265
Religion Probabilities ^d	<i>CATHOLIC</i>	The probability of being Catholic	0.279	0.449
	<i>JEWISH</i>	The probability of being Jewish	0.021	0.143
	<i>PROTESTANT</i> ^a	The probability of being Protestant	0.612	0.487
	<i>NO ANSWER</i>	The probability of not knowing or not answering the Question	0.003	0.055
	<i>NORELIG</i>	The probability of having no religion	0.068	0.252
	<i>OTHER</i>	The probability of other religion	0.017	0.129
Size of place	<i>CENTRAL</i>	DV: central city of urbanized area	0.225	0.418
	<i>SUBURB</i> ^a	DV: suburb	0.339	0.473
	<i>URBAN</i>	DV: urban fringe	0.119	0.324
	<i>RURAL</i>	DV: rural area	0.319	0.466
Labor supply	<i>NOLABOR</i> ^a	DV: mother of family did not work in 1979	0.463	0.499
	<i>WLABOR</i>	DV: mother of family worked in 1979	0.537	0.499
Region	<i>EASTNCEN</i>	DV: East North Central state	0.279	0.448
	<i>WESTNCEN</i>	DV: West North Central state	0.176	0.381
	<i>SOUTH</i>	DV: Southern state	0.236	0.403
	<i>MOUNTAIN</i>	DV: Mountain state	0.186	0.849
	<i>WEST COAST</i>	DV: Pacific/West Coast state	0.123	0.297
	<i>NORTHEAST</i> ^a	DV: Northeastern state	0.209	0.406
Parental variables	<i>MOM-AGE</i>	Mother's age	37.59	7.65
	<i>DAD-AGE</i>	Father's age	38.84	8.20
	<i>MOM-EDUC</i>	Mother's education, highest grade attended	12.15	2.64
	<i>DAD-EDUC</i>	Father's education, highest grade attended	12.33	3.03

(continued)

Table 13.2 (continued)

Dependent variable:	Explanatory variables		Mean	Standard deviation
Public school quality ^c	<i>ST-RATIOS</i>	Student-teacher ratios in school by state	18.83	1.80
	<i>VERBAL-SAT</i>	Verbal SAT test scores of high school students in public schools by state	441.2	28.8
	<i>MATH-SAT</i>	Math SAT test scores of high school students in public schools by state	483.7	31.4
	<i>PEXP</i>	Expenditures per student in public schools by state	2283.4	502

Note: DV: Dichotomous Variable equal to unity for identified characteristic and equal to zero otherwise

School choice dichotomous variable (*SCHOOL*), equal to unity if enrolled in a private school and equal to zero if enrolled in a public school. Mean = 0.126

^aDesignates benchmark categories in the regression analysis, a white male Protestant living in a suburb in a Northeastern state whose mother did not work

Sources: ^bUnless noted otherwise, the data are from the 1980 decennial census, Public Use Microdata Sample, one -in-a-thou sand sample

^cMarket Data Retrieval (1990)

^dNational Opinion Research Center (1987)

^eDigest of Education Statistics (1986)

For further detail, see Chiswick and Koutroumanes (1996)

The list of variables included in the demand equation for private schooling is reported in Table 13.2. Most of the variables are derived directly from the census PUMS file. Table 13.3 presents the estimates and the statistical significance of each variable when there is no religion variable and for two different methods for specifying religion. The algorithm described in Sect. “Methodology” was used to obtain the religion variables in Table 13.3, Regression 1. Five religion variables are included in Regression 1: *CATHOLIC*, *JEWISH*, *NO ANSWER*, *NORELIG*, and *OTHER*, with the sixth category, *PROTESTANT*, as the benchmark.

Column 1 in Table 13.3 shows that the probability of being Catholic increases the likelihood of attending a private school relative to the benchmark, the probability of being Protestant (coefficient = 0.0042 and $t = 11.49$). The probabilities of being Jewish, having other religions, having no religion, and not responding to the religion question were not statistically significant. Religious affiliation clearly affects one’s choice of schools, with Catholics having a higher demand for private schooling.

In Table 13.3, Regression 2, two religion variables are included, the percentage Catholic (*%CATHOLIC*) and the percentage Jewish (*%JEWISH*) in the household’s state of residence. (Official Catholic Directory, 1988, and American Jewish Yearbook, 1988). This method has been used in other studies of school choice, such as West and Palsson (1988), Long and Toma (1988), Gustman and Pidot (1973), and Clotfelter (1976). The partial effect of the Catholic variable is found to be negative and marginally significant (coefficient = -0.0025 and $t = -1.79$). This runs contrary to the impression that Catholics have a higher private school enrollment rate than

Table 13.3 Probit estimates of school choice with alternative measures of respondent's religion

Variable	(1) Religion Algorithm		(2) % Catholic and Jewish in the State		(3) No Religion Variables	
	Coefficient	t-ratio ^a	Coefficient	t-ratio ^a	Coefficient	t-ratio ^a
Constant	-2.5858	(-8.56)	-1.9523	(-6.22)	-1.7986	(-7.54)
<i>INCOME</i>	0.0071	(11.59)	0.0072	(11.70)	0.0079	(12.14)
<i>PRICE</i>	-0.000069	(-2.95)	-0.00007	(-2.99)	-0.00005	(-2.92)
<i>CATHOLIC</i>	0.0042	(11.49)	*	*	*	*
<i>JEWISH</i>	-0.000207	(-0.14)	*	*	*	*
<i>NORELIG</i>	-0.000032	(-0.01)	*	*	*	*
<i>OTHER</i>	0.0031	(1.56)	*	*	*	*
<i>NO ANSWER</i>	0.0025	(0.58)	*	*	*	*
<i>%CATHOLIC</i>	*	*	-0.0025	(-1.79)	*	*
<i>%JEWISH</i>	*	*	0.0254	(3.83)	*	*
<i>FEMALE</i>	-0.0239	(-1.37)	-0.0222	(-1.28)	-0.0321	(-1.35)
<i>WIABOR</i>	-0.1260	(-7.09)	-0.1267	(-7.15)	-0.1265	(-7.02)
<i>HISPANIC</i>	-0.0414	(-1.11)	0.0702	(1.95)	0.0914	(2.38)
<i>BLACK</i>	-0.3216	(-8.56)	-0.4178	(-11.75)	-0.4319	(-12.26)
<i>CENTRAL</i>	0.4392	(19.88)	0.4277	(19.52)	0.4134	(19.03)
<i>XURBAN</i>	-0.2008	(-6.12)	-0.2200	(-6.72)	-0.2287	(-6.94)
<i>RURAL</i>	-0.3051	(-12.57)	-0.3231	(-13.29)	-0.3473	(-13.58)
<i>EASTNCEN</i>	-0.2350	(-4.03)	-0.1929	(-3.23)	-0.1756	(-2.87)
<i>WESTNCEN</i>	-0.4150	(-5.45)	-0.4436	(-5.80)	-0.4589	(-5.80)
<i>SOUTH</i>	-0.2455	(-4.89)	-0.3021	(-5.60)	-0.2837	(-5.06)
<i>MOUNTAIN</i>	-0.8988	(-12.14)	-0.9048	(-11.93)	-0.9034	(-11.01)
<i>WEST COAST</i>	-0.3427	(-6.03)	-0.3206	(-5.46)	-0.3175	(-5.23)
<i>MOM-AGE</i>	0.0039	(1.37)	0.0042	(1.45)	0.0039	(1.24)
<i>DAD-AGE</i>	-0.0002	(-0.06)	-0.00058	(-0.21)	-0.0003	(-0.42)
<i>MOM-EDUC</i>	0.0376	(6.48)	0.0356	(6.16)	0.0329	(6.04)
<i>DAD-EDUC</i>	0.0258	(5.12)	0.0241	(4.81)	0.0222	(4.61)
<i>PEXP</i>	0.000021	(0.69)	-0.000007	(-1.62)	-0.000006	(-1.49)
<i>ST-RATIOS</i>	-0.0015	(-0.20)	-0.0236	(-2.61)	-0.0212	(-2.41)
<i>MATH-SAT</i>	-0.0013	(-0.64)	0.0013	(0.59)	0.0009	(0.37)
<i>VERBAL SAT</i>	0.0028	(1.32)	0.0004	(0.19)	0.0006	(0.23)
Log likelihood	-2436.14		-2311.64		-2235.38	

^aAsymptotic *t*-ratios are in parentheses

Note: Dependent variable equals unity if attend a private school, equals zero if attend a public school. The benchmark is a white male living in a suburb in a northeastern state who is Protestant (Column 1) or the probability of being Protestant (Column 2). *designates variable is not entered into the equation. Sample size: 38,926 observations

Source: U.S. Census Bureau (1983) one-in-a-thousand sample, and Chiswick and Koutroumanes (1996)

Protestants, other things being the same. The Jewish variable is found to be positive and highly significant (coefficient = 0.0254 and $t = 3.83$). Given the very small size of the Jewish population (about 2 percent of the school-age population), the

magnitude and significance of this variable suggest that it is reflecting the effects of one or more omitted variables that are correlated with the percentage Jewish in the state, rather than a direct effect of a higher private school enrollment of Jews.

The coefficients of most of the other variables in the equation are largely invariant with respect to the religion variables.⁸ Two exceptions are the Hispanic-origin variable and the student-teacher ratio in the state. The Hispanic-origin variable has a positive and significant effect on private school enrollment when there is no statistical control for religion (coefficient = 0.0914 and t-ratio = 2.38) or when the variables for the percentage Catholic and percentage Jewish in the state are included (coefficient = 0.0717, t-ratio = 1.95). This becomes a statistically insignificant negative effect (coefficient = -0.0414, t-ratio = -1.11) when the religious probability variables are used. That is, Hispanics are more likely to be enrolled in private (including parochial) schools, not because they are Hispanic per se but because they are more likely to be Catholic. Controlling for the higher probability that they are Catholic, there is no difference between Hispanics and non-Hispanic whites in private school enrollment. That is, within religious groups Hispanics are no more likely than non-Hispanics to enroll in private schools.

In equations without religious variables or using percentage Catholic and Jewish in the state, the higher the student-teacher ratio in the public schools, the lower the enrollment in private schools. This anomalous effect disappears when the religious distribution variables are included in the analysis (Table 13.3, Column 1, coefficient = -0.0051, t-ratio = -0.20).

Thus, there is compelling evidence that in an analysis of the demand for private schooling, when direct information on religion is not available, the inclusion of the religion probability variables yields results that are more robust than when religion is ignored or when the state proportion of Catholics and Jews is employed.

Summary and Conclusions

Data are not available in the decennial census and in many other microdata files on a respondent's religion. Yet this is often an important variable in the analysis of individual and household behavior. The approach used by some, to include the percentage Catholic in the state as a proxy for the respondent's religion, is too crude. A religion proxy algorithm is developed in this paper. Using data from the GSS, it is possible to calculate the proportion of each ancestry group that identified themselves with each of the six religious categories: Protestant, Catholic, Jewish, Other Religion, No Religion, and No Answer.

Using the data on ancestry in the PUMS of the 1980 or 1990 censuses, each respondent can be assigned an equivalent GSS ancestry group. Hence, each census respondent can be assigned a probability distribution of religion.

The fruitfulness of the technique is demonstrated through an analysis of the school choice (public versus private school) decisions of school-age children. A

⁸See Chiswick and Koutroumanes (1996) for a discussion of the other variables.

multivariate analysis of school choice using 1980 census data is reported without religion variables, with variables for percentage Catholic and percentage Jewish in the respondent's state, and using the RPA developed in this paper. The RPA is shown to be robust and to produce more sensible results. Anomalous findings that appear when religion is ignored, or when the distribution of religion by state is employed, disappear when the RPA is used.

The probability distributions of religion are reported in this paper and can be used directly by other researchers for analyses of a wide range of social and economic issues for which religious background or orientation may influence behavior.

Appendix

Table 13.4 Ancestry and religion questions, GSS and census

1. General Social Survey
Ancestry: (asked each survey since 1972) ⁽¹⁾
Q: "From what countries or parts of the world did your ancestors come?"
If more than one country is named code up to three responses.
"If more than one country is named: Which of these countries do you feel closer to?"
Religion: (asked each survey since 1973)
Q: "In what religion were you raised?"
Response:
Protestant
Catholic
Jewish
None
Other (specify)
Don't Know No Answer
<i>"If Protestant: What specific denomination is that if any?"</i>
Response:
Baptist*
Methodist*
Lutheran*
Presbyterian*
Episcopal Church
Other (specify)
No Denomination
Don't Know
No Answer
(*Detailed sub-denominations reported.)
2. Decennial Census-1980 and 1990 Ancestry:
1990: "What is this person's ancestry or ethnic origin?" (specify)
1980: "What is this person's ancestry?"
⁽¹⁾ The first two ancestries reported are coded in the order reported. An ancestry response revealing solely a person's religion is coded with all other reported religious groups. Distinct triple ancestry codes were created by the Census Bureau for the 1980 (but not the 1990) census PUMS file for the 17 most frequently reported triple ancestries.

Table 13.5 *GSS ethnic groups with corresponding 1980 and 1990 census ancestry codes*

GSS Ethnicity	1980 Census code	1990 Census code
America	901–903, 906,915	924–928, 940–944
American Indian	916–918	913–923
Arabic	10, 100, 400–418, 421–452	19, 100, 400–417, 421–429, 434–496
Austria	1–2, 74	3, 4, 76, 120
Belgium	5–7	8–10, 77
Canada (French)	912	935–937
Canada (Other)	98, 909–911	931
China	700–712	706–718, 782–783
Czechoslovakia	104, 105, 106	111–114, 153, 181
Denmark	11–13, 908	20, 23, 49, 930
England and Wales	16–19, 92, 93, 96–97, 800–801, 805	11–15, 22, 79, 97
Finland	24–27	24
France	28–31, 77, 90–93, 98, 95,924	1, 6, 16, 26–28, 80, 83, 187
Germany	32–44, 75, 933–936	32–44, 122, 183, 195, 928
Greece	8–9, 46–48, 102, 103	17, 18, 45, 130
Hungary	113, 114	124, 125
India	600–637	603–695
Ireland	22, 50,926	50, 81, 87, 99
Italy	52–73, 76, 95	30, 51–74, 78, 185
Japan	719–721	740–748
Lithuania	111, 117, 120	129
Mexico	206–212	210–218, 292–294
Netherlands	14, 15	21, 29
Norway	78, 88–89	23, 82
Philippines	714, 717	720
Poland	122–124	142, 193, 196
Portugal	79–81	84–86
Puerto Rico	213	261
Romania	125–129	144, 191
Russia (USSR)	136–174	101–108, 115, 117–119, 127–128, 132, 148, 156–171, 178, 190, 431
Scotland	20–21	88
Spain	3–4, 45, 200–205	2, 5, 7, 200–208, 291
Spanish (Other)	216–243	221–252, 290,295,360
Sweden	82, 94	75, 89–90, 98
Switzerland	83–87	91–96
West Indies (non-Spanish)	300–341, 913	300–336, 365–380
Other	419, 723–756, 800–803, 808–859, 803, 806–859, 998	176,419,600, 700–704, 730–736, 750–778, 785–795, 998
No answer	900–902, 906,907,937,999	995–997, 999

Source: U.S. Bureau of the Census ([1992](#), Appendix E, Ancestry Codes; [1983](#), Appendix I, Ancestry)

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Part IV

The Value of Jewish Time

Time is a scarce resource. There are only so many hours in a day and days in a year. We all have the same amount of time, but the economic value of that time differs across people. Diverting an hour of time from working to another activity is much more expensive for someone who has very high earnings than it is for someone with very low earnings.

Judaism is a time-intensive religion. Knowing the customs and practices of daily prayers and religious holidays, festivals, and community events, which are distinct from the general American culture, requires learning, whether it is active learning (e.g., taking courses, attending lectures, or reading books) or passive learning (e.g., learning by living). Engaging in Jewishly related activities takes time, where the time requirements are greater the more intense the involvement. Moreover, religious practice involves at least a minimal knowledge of Hebrew, a language that is not used for secular purposes in the United States. And for those more involved in Jewish practice, a deeper knowledge of Jewish law and of Hebrew is required, as well a deeper commitment of time for religious practice.

The two chapters in Part IV are on the effect of “The Value of Jewish Time.” Chapter 14 is on “The Cost of Living Jewishly and Jewish Continuity,” (with Carmel U. Chiswick). This chapter explores the costs and benefits of living a Jewish life in an open and free society in which there are (virtually) no major restriction on Jews or practicing a Jewish lifestyle. A major emphasis is placed in this chapter not only on the money cost of living a Jewish life (e.g., synagogue memberships, Jewish education for the children, kosher foods, etc.), but more importantly, the time costs and other constraints. As Jews have become highly educated and have high earnings, the cost of the time devoted to religious learning and practice has increased. Indeed, as the time costs have increased, accommodations have been made to reduce the time involved in Jewish learning and practice (C. Chiswick 2014).

In addition to the time costs, living a Jewish life also puts other constraints on the individual. In a country where Jews are only 2 percent of the population, searching for a Jewish spouse means that the set of potential spouses is constrained. Being observant of the Sabbath means that the company baseball outings on Saturday are out of the question. Having a business dinner at a seafood restaurant is also a problem. The chapter closes with recommendations for Jewish families, Jewish institutions, and the Jewish community as a whole as to how to live as a high-value-of-time participant in the modern twenty-first century while at the same time promoting or strengthening Jewish religious practice, lifestyles, and continuity.

This is followed by Chap. 15, “The Earnings of American Jewish Men: Human Capital, Denomination, and Religiosity,” (with Jidong Huang). Unlike the previous chapters, it is not a comparison of American Jews with others, but is limited to analyses among Jewish men. The data are from the 2000/01 National Jewish Population Survey (NJPS), which uses a direct Jewish identifier.

The analysis reveals that full-time Jewish education as a youth, which involves a dual language (English and Hebrew) educational program and intense study of religious texts, and current (adult) synagogue participation, which reinforces this learning, are associated with significantly greater earnings. Yet, the lower earnings of the Orthodox and those who attend the synagogue daily suggests that beyond some point, greater religious participation detracts from labor market earnings. This may be due to more intense religious practice taking time away from labor market training and hours of work, from religious practices placing constraints on where one lives and how one works, or from discrimination against the most observant.

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Chapter 14

The Cost of Living Jewishly and Jewish Continuity



Barry R. Chiswick and Carmel U. Chiswick

Introduction

Like most other Diaspora countries at the turn of the twenty-first century, the United States is a free and open society. Long gone are the days when Jews were compelled by non-Jewish authorities to live in ghettos, to wear distinctive clothing, or to be otherwise publicly identified so that their activities could be restricted. Over the course of the last two centuries these barriers have fallen at a faster or slower rate in various Diaspora countries, with periods of backsliding and periods of greatly expanding freedoms and secular opportunities. American Jews are now to be found in nearly all sectors and major institutions of society - business, government, education, professions and the arts.

In this era of freedom the issue of Jewish continuity takes on a different meaning. Can Judaism and Jewish identity survive from generation to generation in a free and open society in which one's Jewishness may be no more significant to others than the city in which one was born or the baseball team one cheered for as a youth? This chapter explores both the costs and benefits of living Jewishly and their effects on American Jewish continuity. It begins by focusing on the costs faced by Jewish families and their consequences for the American Jewish community. It then takes a broader view of Jewish continuity, looking at the cost of living Jewishly as it affects the marriage and career choices of young Americans. The chapter concludes with some policy recommendations that flow from the analysis.

This is a revision of the original article published in *Contemporary Jewry*, 21(1), 2000, pp. 78–90, co-authored with Carmel U. Chiswick.

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The Cost of Jewish Living

Jewish living can be very expensive.¹ Although synagogue memberships vary considerably as to cost, most of them involve substantial annual dues (often accompanied by an obligatory contribution to the “building fund” or its counterpart) as well as a continuous stream of “opportunities” to make additional contributions for special occasions or causes. Yet only one third of all American Jews affiliate with a synagogue, and it is estimated that typically less than three percent of Jewish family income is allocated to Jewish philanthropies and synagogue memberships (Kosmin 1988; B. Chiswick 1991; Kosmin 1991; Rebhun 1997). Compared to other American religious groups the financial obligation associated with Jewish living is fairly high, but not extremely so. Even considering such collateral expenses as Jewish education, summer camps, or Bar/Bat Mitzvahs, few Jewish families spend as much of their income as the 10 percent tithe expected in some Protestant denominations. Indeed, by any objective standard the American Jewish community can well afford to sustain itself and support its own institutions.

So why does everyone say that Judaism is so expensive? One reason is because Judaism tends to be a very time-intensive religion and time budgets are seriously constrained. We speak of “spending” time on an activity, of being unable to “afford” the time for everything we’d like to do, and of avoiding activities that “waste” time because they preclude spending it on a “better” alternative. Although money incomes have risen during the last century, the amount of time available for daily life is relatively fixed, effectively constrained (despite a shorter work week and longer life expectancy) by the finiteness of the day, year and life. The value of a unit of time is now very high, in part because of the generally high productivity of American workers, in part because of the relatively high skill levels of American Jews, and in part because of the expanding array of non-work opportunities available to American consumers. Indeed, it is the value of time in these many activities that effectively measures the value of scarce time.²

Although turn-of-the-century Jewish immigrants to America may have been fairly traditional in their Jewish observance by today’s standards, most of them were not especially religious by the standards of their own era. Indeed, the Jewish observance of immigrants was typically casual at best, the perception being that old-country Judaism was unsuited to life in the New World (i.e., “too” expensive). In this context the major American synagogue movements (mainly the Reform, Conservative and Modern Orthodox) were accepted as religious innovations that adapted Judaism to its modern environment, primarily by reducing the time cost of Jewish observance (C. Chiswick 1995, C. Chiswick 1999). Religious innovations

¹For an interesting estimate of the out-of-pocket costs for various categories of Jewish expenditures see (Monson and Feldman 1995).

²By this measure even children can have a high value of time. For example, time in Hebrew school competes with time for secular school studies as well as the myriad of after-school and weekend activities ranging from ballet lessons to football practice.

that raise the efficiency of Jewish resources constitute a decline in the real cost of being Jewish and a net gain for Jewish consumers, and indeed this is the economic basis for the strength of these modern forms of Judaism in the United States today.

Yet social innovations often have unintended consequences, and the changes introduced by American streams of Judaism may be perceived as reducing the quality of Jewish living in some respects even as they increase it in others. Recent research on the economics of religion suggests that religions most vulnerable to such a decline in quality would share certain characteristics, including an important social dimension to the life of the religious group and an emphasis on religious human capital (Iannaccone 1988; Iannaccone 1990; Iannaccone 1992). Both of these characteristics are very important to Judaism, and their economic implications apply *a fortiori* to the experience of American Jews. In effect, they raise the possibility that reductions in the cost of Jewish living have been accompanied by a decline in the quality of Jewish experience that at least partially offsets the gain in communal welfare. The remainder of this section presents a brief sketch of the economic analysis as it applies to American Judaism.

A religious group may be thought of as a special kind of “club” which people can join for motives which are essentially social rather than (or as well as) spiritual (Iannaccone 1988). In this respect Judaism must compete with other “clubs” for the money, time and energy of its members. Such competition may have been unimportant when Jews were restricted in their memberships outside the community, but in today’s environment of freedom Jews participate widely and actively in many social groups and political organizations. This expanded opportunity alone would imply a reduced amount of time and other resources spent on Jewish organizations (holding everything else constant), and hence less participation in Jewish life (B. Chiswick 1991). But the sense of belonging to a group (whether family, synagogue, community, or the entire Jewish People) is deeply embedded in Jewish ritual, to the point where attempts to separate religious adherence from Jewish identity (peoplehood) are often artificial at best. Where the social and spiritual dimensions of Judaism are inextricably entwined, substituting secular for religious social activities necessarily carries with it some decline in the intensity or quality of religious observance.

The decline in the quality of Jewish life is further exacerbated by a “bandwagon” effect in reverse. Members who participate actively in any social group typically raise the value of belonging not only for themselves but for other members as well, effectively increasing the efficiency of resources (expenditures of time and money) for all members. People thus tend to be attracted to groups in which others participate actively, and there is a disincentive to join groups in which participation by others is marginal. Jewish institutions and organizations are especially vulnerable to this bandwagon effect because of the interaction between spiritual and social values, whereby the spiritual life of the community is adversely affected when participation declines. So as more people devise Jewish lifestyles that involve relatively low time on their own part, those who continue to devote a high level of resources to Jewish life would find that they are obtaining less satisfaction than before. As a result, they can be expected to reduce their own expenditures of time and money on Jewish life.

The importance of religious human capital for Judaism can scarcely be exaggerated. Often associated with Jewish education and scholarship, religious human capital includes any knowledge or skill that raises the efficiency of resources devoted to current religious observance but has no corresponding effect on efficiency for secular activities (Iannaccone 1990). Religious human capital is acquired through previous activities, not only religious education (formal or informal) but also through experience with Jewish family, synagogue and community life. Perhaps the best example of Jewish human capital is the Hebrew language itself, the role of which is so important that basic religious education is often called "Hebrew School." Knowledge of Hebrew has virtually no implications for American Jews in their secular activities. Yet even a rudimentary grasp of that language contributes greatly to the value of any Jewish experience, and a sophisticated knowledge of Hebrew is an *entree* into the rich body of literature at the core of Jewish intellectual life.

Knowledge tends to beget knowledge, and the high levels of secular education characteristic of American Jews can be expected to facilitate (i.e., increase the efficiency of) Jewish learning. Yet because skill-formation activities tend to be fairly time-intensive, making them especially costly for a population with many attractive alternative uses of time, the trends in Jewish education have been ambiguous at best and often on the decline (Wertheimer 1989; Fishman and Goldstein 1993). A decline in Jewish participation for any reason, including the social motives discussed above, carries with it the implication of a reduction in the time spent in Jewish experience, a major avenue for acquiring the memories, knowledge, and skills which are an important component of Jewish human capital.

American Judaism is especially vulnerable to this decline in religious human capital not only because it is a skill-intensive religion (using a language that has little or no secular value) but also because of the centrality of intergenerational continuity to Judaism itself. Parents teach Judaism to their children in part by example and in part through the integration of Jewish experience into ordinary family life. Low levels of Jewish observance in the home, perhaps because low levels of human capital make Jewish observance a less satisfying activity, give children fewer opportunities to acquire Jewish skills and memories. Thus a decline in Jewish human capital for one generation can have a cascading effect on succeeding generations, a downward spiral that can seriously erode the quality of Jewish life not only for the individual but also for the community as a whole.

The American Jewish community has been mindful of these concerns and remedial steps have been (and are being) taken. Indeed, American Jewish culture exhibits many examples of an increase in Jewish education and experiences in many dimensions of its intellectual and spiritual life. Yet at the same time there have developed a variety of Jewish lifestyles compatible with very high values of time and very low levels of Jewish human capital. These Jewish identities require little or no religious education and emphasize elements common to Judaism and the non-Jewish society in which Jews live and work. To the extent that these Jewish lifestyles have been accepted by the Jewish community, they further reduce the incentive to acquire Jewish human capital and thus contribute to the perception of a decline in the quality of Jewish life.

Consider a continuum along which American Jews would be ranked not by their religious beliefs or even practices but by the importance of specifically Jewish human capital for their preferred lifestyle. At one extreme would be those who ignore (or characterize as “obsolete”) Jewish religious ritual, who avoid associating themselves with the particularistic aspects of Jewish society, or who limit their definition of Judaism to its humanistic or universalistic precepts. At the other extreme would be those who emphasize specifically Jewish culture in any of its various manifestations, not only as religious ritual but also as politics, literature, history and the arts. The former would see little point to investments in Jewish human capital, focusing instead on acquiring skills that are of general use for both work and leisure in the larger society. But everywhere else along the continuum there would be some benefit to acquiring Jewish knowledge and experience, so the optimal investment decisions would include some Jewish as well as general human capital.

Although American Jews have experimented with lifestyles nearly all along this continuum, economic incentives tend to discourage those in the center of the continuum. Many attractive alternatives compete with Judaism for their time, and high levels of secular human capital raise productivity in these other activities. The implicit cost of Jewish life is thus very high. If Judaism is perceived as an inferior choice the optimal response would be to allocate less time to it, thus beginning the downward spiral that leads to low levels of Jewish human capital and little commitment to Jewish communal life. If instead Judaism is perceived as a valuable “economic good” the optimal response would be to raise efficiency by acquiring more Jewish human capital, making Jewish life more satisfying and further stimulating the time and effort devoted to Jewish activities and communal participation. Both of these economically “rational” responses have contributed to the paradox of American Judaism described by one observer as “apathy and renewal” (Wertheimer 1993).

Love and Work

The cost of Jewish living in a free and open Diaspora community goes beyond the immediate concern with expenditures of money and time, whether on current activities or on investments in Jewish human capital for the future. “Jewish living” refers to a lifestyle, and lifestyle choices have implications for selection of a mate and for labor market opportunities. To the extent that different Jewish lifestyles impose different constraints, they may be viewed as having different cost implications for these two spheres of activity. Each of these very personal decisions on the part of individual Jews can collectively have an enormous impact on the Jewish community as a whole.

Marriage is an enterprise that entwines two persons in multiple aspects of their adult lives, especially in the family life that they share as parents, as adult siblings, as cousins, and as the children of aging seniors. Although romantic love can strike anywhere, selection of a marriage partner is inevitably influenced by the potential

for mutual productivity gains associated with this enterprise. For various reasons, human capital characteristics are generally subject to positive assortative mating in this selection process (homogamy), so that highly educated, very healthy, or especially attractive men and women tend to marry each other, as do those with low levels of these desirable traits (Becker 1981; C. Chiswick and Lehrer 1991). A lifestyle that makes heavy use of Jewish human capital is far easier (less costly) to sustain with a partner who has chosen a similar lifestyle, and the human capital intensity of Jewish observance enhances the gains from marriage the higher the spouse's level of Jewish human capital. The greater the human capital intensity of one's Jewish lifestyle, the greater the gain from marriage to a person with more Jewish human capital and the lower the likelihood of selecting a non-Jewish partner. Conversely a lifestyle in which specifically Jewish human capital plays little role extends the pool of potential marriage partners by including non-Jews whose religious human capital is similarly non-specific, or specific to another religion that is less family oriented.

If there are many human capital attributes to which the marriage market is sensitive, the complexity of the search process is greatly reduced by the tendency for them to be mutually correlated with each other. The highly educated tend to devote more resources to maintaining good health and vice versa, for example, and people with high skill levels in the workplace are more efficient at developing high skills related to home and family (Michael 1973; Becker 1981). But Jewish human capital seems to be something of an exception, in part because of the destabilizing forces discussed in the previous section of this paper. So the marriage market in which Jews participate is effectively sorting on two dimensions, one being a bundle of various types of secular attributes and the other a somewhat smaller bundle of Jewish skills and experiences. Those persons whose Jewish lifestyle is towards the low end of the Jewish human capital continuum will be sorting primarily on the secular dimension, while those at the high end of the Jewish human capital continuum will be sorting on both dimensions simultaneously. Searching simultaneously on both secular and Jewish dimensions introduces the possibility of tradeoffs and hence a "poorer" outcome with respect to one or the other (secular vs. Jewish) attributes.

The pool of potential marriage partners is also much larger for those satisfied by low levels of Jewish human capital, for it includes many non-Jews with similarly low levels of religious human capital. The twentieth century has seen the breakdown of many social barriers between Jews and non-Jews, virtually removing the adverse effects for Jews of residential segregation and discrimination in higher education, the labor market, clubs, etc. With the expansion of social interactions between Jews and non-Jews there is less of the anti-Jewish prejudice that would make interfaith dating and interfaith marriage unacceptable to the non-Jewish party. Taken together with reduced levels of religious human capital in many non-Jewish groups, this further reduces the proportion of Jews in the relevant potential marriage market pool. The number of non-Jewish potential marriage partners in the United States can be substantial, since Jews comprise only two percent of the total population and less

than four percent of the college educated (B. Chiswick 1992; Goldstein 1992; B. Chiswick 1993; C. Chiswick 1995).³

Jewish lifestyles also vary considerably in the extent to which they impose costs when Jewish identity or observance interferes with secular educational attainment and with the labor force processes of hiring, promotion and career advancement. For many these costs may be small or trivial, while for others they may be substantial. Undoubtedly, the cost is larger the greater the extent of involvement in visible Jewish practices. In the corporate or academic world (outside of Jewish Studies) wearing a kipa might be considered embarrassingly parochial, observing kashrut perceived as irrational, and not working on Shabbat and Jewish holidays viewed as a sign of low commitment to firm or profession.⁴ These are certainly not new issues, but neither have they entirely disappeared with the reduction of social barriers between American Jews and non-Jews.

While such costs may be reduced by entering a sheltered sector of the economy (for example, Jewish communal service, the rabbinate or a profession in which these penalties are smaller), this has little appeal for most American Jews. They are too diverse in their career choices and a small minority in most occupations. An enclave economy would substantially limit the scope of their labor force activities and hence incomes. Moreover, most American Jews value their interactions with the non-Jewish world and believe that the Jewish community as a whole would be disadvantaged if the observant were to be segregated into a “Jewish” economic sphere. Yet the secular labor market, nevertheless, imposes a cost to Jewish observance that is greater the greater the “visibility” of Jewish practice and the closer its adherence to the Jewish calendar and rhythms of daily life (C. Chiswick 1996).

Throughout the first half of the twentieth century, Jewish “assimilation” referred to integration into the larger society and was viewed as a highly desirable goal in itself as well as a prerequisite for financial and political security. Jewishness itself was taken for granted as an ascribed characteristic which could not be shed, but which might become transparent in an “Americanized” Jewish community. By the end of the century it was economic and social integration that was taken for granted by American Jews and “assimilation” refers to the loss of Jewish identity associated with out-marriage and apathy. Human capital has played a key role in this reversal, for in the earlier period Jews allocated most of their educational investments to

³Suppose, for example, that by ignoring Jewish human capital a person would be willing to consider as a potential spouse any highly educated person (which for the sake of this example would include all Jewish partners). Then the pool of potential partners would be 25 times larger than if it were limited to Jews only. Even if only 40 percent of these non-Jews were available because of the low specificity of their own religious human capital, the pool of potential marriage partners would still be larger by a factor of ten.

⁴As but one example of the cost of Shabbat observance, many academic professional associations now schedule their meetings over the weekend to take advantage of reduced airfares if there is a Saturday overnight and the lower hotel room rates on weekends. Or consider the long-time Shabbat-observing employee who Chrysler Corporation wishes to fire after reassigning him to a shift that includes Friday night (Forward 1997).

secular achievements without fully appreciating the extent to which Judaism requires Jewish specific human capital to sustain itself in an open society (C. Chiswick 1999).

Policy Recommendations

The Jewish community has made many adjustments to enhance its intergenerational continuity as a religious group, focusing its concern on both the number of Jews and the content of what it means to be Jewish in a modern, democratic, free Diaspora. Even so, the American Jewish community has not yet stabilized and the challenges that remain are enormous. The economic perspective developed in this paper is suggestive of some directions for continuing adjustment in the future.

Jewish continuity requires the transmission of Jewish knowledge, skills, experiences and memories. These must be imparted to Jewish youth by their parents (many of whom may require education themselves in order to fill this role) and by Jewish institutions in the community. Yet they cannot come at the expense of the high level of secular education that not only generates economic security but also constitutes an important aspect of American Jewish identity. Moreover, the suburban Jewish community of today cannot benefit from the concentrated residence patterns of the past, whether a European-style ghetto or a densely Jewish urban neighborhood. Thus the formation of Jewish human capital must rely on a system of Jewish education, whether formal or informal, that supplements and reinforces the secular education received by Jewish children.⁵ Jewish day schools that combine the secular and Jewish subjects are promising in this respect, insofar as they educate youth to live and work simultaneously in both the secular and Jewish spheres. Yet much of Jewish human capital requires maturity beyond childhood, suggesting the need to develop comparable institutions for the education of older youths and adults.

The expansion of Jewish education will be very expensive (in both time and money), and even families who desire Jewish continuity may find it too great a sacrifice. Greater emphasis needs to be placed in fund raising on the importance of Jewish education for continuity. Yet contributions to Jewish philanthropies are under increased competitive pressure as declines in Jewish identity, increases in secular activities, and rising intermarriage rates have all been associated with a shift in giving toward non-Jewish causes (B. Chiswick 1991). At this point in American Jewish history the will to acquire a Jewish education may be the key factor in the decision to finance it. Perhaps a redirection of fundraising priorities would be appropriate, placing less emphasis on the amount of money to be raised and more on the function of contributions (of time and/or money) as an expression of Jewish identity. A reappraisal of priorities may also be necessary for the expenditures of philanthropic dollars. With the low birth rate and consequent aging of the American Jewish population, many communities find themselves providing high-quality services to the

⁵ See (Wertheimer 1999a) for an excellent delineation of the Jewish education system in the U.S.

aged but low-quality services for youth. A partial redirection of resources from the aged to the young may be a necessary adjustment for Jewish communal survival, and one would hope that the grandparents would appreciate the importance of this reallocation of resources.

While hardly a panacea for the American Jewish community, the school choice/school voucher movement has some promising implications (Wertheimer 1999b). Zero-tuition public schools present tough competition for tuition-charging Jewish day schools. A voucher program that successfully levels the playing field by reducing (or eliminating) the discrepancy in the money cost for the two types of schooling may be very effective in promoting Jewish education among American youth. Moreover a substantial increase in Jewish school enrollments would permit “economies of scale,” reducing the average commuting time for Jewish students, encouraging the development of new educational materials and techniques, and lowering the cost per student of providing Jewish schooling.

Although much Jewish human capital is formed in the home, there are many parents who largely missed out on this aspect of Jewish education when they were young. Rather than viewing them as a lost generation, they should be viewed as an opportunity. “Night school” was an essential part of the American education of adult Jewish immigrants at the turn of the twentieth century. A new night school movement may be needed for the Jewish education of young adults at the turn of the twenty-first century. The facilities exist in synagogues, JCCs and Jewish day schools, and most are already providing some form of adult education. But its scope needs to be broadened, including community-wide efforts that promote the idea that “Jewish education is not just for children anymore” and that continuity begins with Jewishly educated and involved parents.

While out-marriage should be recognized as symptomatic of low levels of Jewish human capital, reducing the relative cost of in-marriage should be a high priority for the American Jewish community. Surely the synagogues should try to develop roles for Jewish singles, whether teenagers or adults, that would integrate them into the community as well as providing a social outlet. Yet it is on the college and university campuses, while in undergraduate, graduate or professional school, that so many youths find their mates. Hillel Houses (or a comparable institution) can serve a useful function there, but they require imaginative programming and perhaps more linkages to other Jewish communal institutions.

If the entire community would probably benefit by paying more attention to the Jewish potential of its youth, the traditional two-parent, and the increasingly common single-parent, Jewish family also needs to be better integrated into Jewish communal life. Synagogues, Jewish Community Centers and Jewish summer camps need to be more responsive in their dues/fee structures to lower income households. The increasing family orientation of synagogues is a plus. Yet most communal institutions need to broaden their approach so as to incorporate single-parent families and Jewish singles of all ages into their structures.

Workplace barriers to Jews have fallen dramatically over the past century. Yet many professions (outside of Jewish communal service itself) still present barriers to members who wish to combine Jewish religious practice with full participation in

their profession. The goal should be that Jewish religious practice should not have to come at the expense of occupational choice and professional advancement. Usually this merely requires raising the level of consciousness of others, but sometimes it may require legal action. Always, however, it requires the support of other Jews, for nothing is more undermining of the exercise of Jewish observance than the lack of support from Jewish colleagues who prefer other lifestyles. The community as a whole needs to focus attention on mutual supportiveness among Jews and to work toward removal of remaining workplace barriers, whether implicit or explicit.

Judaism has survived 3500 years, mostly in Diaspora. There has been no period in which Judaism and Jewish continuity has been achieved without cost, and today is no exception. Jews and Judaism have in the past shown a remarkable resilience to stresses introduced by these costs and by changes in the secular world around them. Surely modern Jewry should be able to do the same. Indeed, the ingredients exist for a successful response to the challenges ahead in the early twenty-first century United States. All that is required is the imagination and will of a committed Jewish community.

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Chapter 15

The Earnings of American Jewish Men: Human Capital, Denomination and Religiosity



Barry R. Chiswick and Jidong Huang

Introduction

Research has shown that there are substantial variations by race, ethnicity, and religion in the educational attainment and earnings of adult men and women in the United States. American Jews, for example, have been shown to have a higher educational level, and, both overall and when education and other variables are held constant, higher occupational status, and higher earnings than other whites.¹ This chapter fills a void in the literature on the analysis of earnings among American Jewish men. To what extent are differences in earnings among Jewish men due to their schooling, marital status, and nativity, issues that have been studied among

¹For recent research regarding Jewish men and women, see, for example, this volume Parts I and II, Chiswick (1988, 1993, 1999, 2007), Burstein (2007), Lehrer (2006, 2010), and Lieberman and Waters (1988), and the references therein. The comparison with other whites is appropriate. Of the male Jewish respondents in the 2000/2001 NJPS, 97 percent report their race as white. This is consistent with the racial distribution of Jews in the General Social Survey, 96 percent white non-Hispanic, 1 percent Hispanic, 2 percent black, and 1 percent Asian (Smith 2005, p. 287).

This is a revision of the original article published in *Journal for the Social Scientific Study of Religion*, 47(4), December 2008, pp. 694–709, co-authored with Jidong Huang.

We appreciate the comments on an earlier draft from Paul Burstein, Carmel U. Chiswick, Danny Cohen-Zada, Roberta Farber, Allan Glicksman, Robert Goldfarb, Allan Kensky, Evelyn Lehrer, Uzi Rebhun, and William Sander. The data under study are from the NJPS, 2000/2001 that was sponsored by the United Jewish Communities and is distributed by the North American Jewish Data Bank (www.jewishdatabank.org).

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other groups. Unique to this study, to what extent are their earnings influenced by their religious affiliation (secular or Jewish denomination), Jewish human capital (type of Jewish education), and degree of religiosity (frequency of synagogue attendance). It also tests whether there is a nonlinear effect of religiosity, that is, if beyond some point, greater religiosity (as expressed by denomination or synagogue attendance) is associated with lower earnings, perhaps because religious activities compete with secular labor market productivity.

The U.S. Census of Population has never explicitly included a question on religion. For an analysis of the debate over including a question on religion in the decennial census, see Schultz (2006). The Census Office (the predecessor of the Census Bureau) conducted a special survey of about 10,000 American Jewish families in 1890, and asked occupation but not earnings. In March 1957, the Current Population Survey (conducted by the Census Bureau for the Bureau of Labor Statistics) for the first and last time included a question on religion, in addition to the standard questions on employment, earnings, and occupation. Microdata files do not exist for either sample. See Billings (1890), Chiswick (2001), and the U.S. Bureau of the Census (1958, *n.d.*). Since 1970, the decennial census has included a question on ancestry, but the coding system masks any response that might reveal the person's religion.

Since Jews are currently only about 2 percent of the population of the United States, the sample sizes for Jews in privately collected surveys are relatively small. As a result, studies that have identified Jews have tended to use indirect Jewish identifiers (e.g., the distinctive Jewish name technique) or, if there is a direct Jewish identifier, to be of relatively modest size. Data on Jews are also available from surveys conducted by local Jewish communities and from the 1971, 1990, and 2000/2001 National Jewish Population Surveys (NJPS). With the exception of the 2000/2001 NJPS, these Jewish surveys generally do not ask about individual earnings. Yet, even with these data limitations, when roughly comparable results emerge from a variety of independent data sets one has considerable confidence in the robustness of the findings of higher levels of schooling and earnings among American Jews.

The data sets that revealed the higher levels of schooling and earnings of American Jews generally have too few observations on Jews to perform statistically meaningful multivariate analyses among Jews. Pooling the data from different surveys is not practical because these surveys use somewhat different methodologies and questions for identifying Jews and for other variables. Moreover, some matters of interest that relate specifically to Jews cannot be addressed because relevant questions are not included. For example, does Jewish denomination matter for the earnings of Jews, and does this depend on whether it is childhood or current denomination?

Fortunately, NJPS 2000/2001 asked earnings and other relevant questions for a sufficiently large sample to conduct a statistical analysis of earnings. These data are analyzed here to provide the first systematic analysis of the determinants of earnings among adult (age 25–64) American Jewish men. The analysis is limited to adult but not aged male respondents because of the additional complexity of incorporating labor supply into the analysis of earnings for women and aged men, and the limited data on labor supply in the NJPS.

National Jewish Population Survey (NJPS)

The NJPS 2000/2001 employed a two-step survey procedure. A set of screener questions was administered by telephone to a large stratified random sample of the U.S. population, selected by random digit dialing, to identify households that included at least one person who is currently Jewish or is of Jewish ancestry or origin, broadly defined.² Using these data, a stratified random sample of about 4500 households was selected that had been identified in the screener survey as including at least one Jewish person. One randomly selected adult in the household was designated as the respondent, without regard for that person's current religion or Jewish origin or ancestry. That respondent was interviewed by telephone about himself or herself, and about other household members.

The questionnaire inquired about the respondent's current demographic and labor market characteristics, and about the respondent's religion, parent's religion, religious practices, Jewish education, and involvement in Jewish-related activities while the respondent was being raised and currently. Many of the same questions, but not all, were asked about other household members, including the respondent's spouse, if any.

The NJPS 2000/2001 serves as the basis for this study's analysis of the earnings of adult male American Jewish respondents. The previous NJPS surveys (1990 and 1971) and most communal Jewish surveys cannot be used for this purpose because they do not ask the earnings of individuals, although they may ask about household income. Note that the NJPS 2000/2001 was a stratified random sample with an oversampling of denser Jewish communities. Thus respondent weights are applied in the analysis conducted here. Because earnings and other labor market information were inadvertently not asked of the spouses of the respondents in some of the "replicates" the sample size for spouses is substantially reduced.

While it would be desirable for comparative purposes to have a sufficiently large random sample of non-Jews in the NJPS, this is not the case. The non-Jewish respondents are in households with at least one Jewish person. They do not constitute a random sample of non-Jews.

Statistical Methodology, Earnings Model, and Hypotheses

The analysis of earnings among adult Jewish men is conducted in a two-stage procedure. Among the adult male respondents, age 25 years to 64 years, who worked and had an occupation in the year prior to the survey, about one-third refused to respond to the question on their earnings. Thus, the analysis of the data on earnings might be subject to sample selectivity bias. That is, the individuals who reported their earnings may not be a random sample of the Jewish survey respondents.

²The NJPS 2000/2001 data and descriptions of the data and methodology are available from the North American Data Bank at <http://www.jewishdatabank.org>

Thus, the first stage in the study of earnings is the analysis of the determinants of who responded to the earnings question. For this stage a dichotomous variable is created, which equals one if the respondent answered the question on earnings and equals zero if the respondent did not answer the question. This analysis is first performed using ordinary least squares (OLS) analysis and then, because of the dichotomous dependent variable, performed using logit analysis. The results are shown to be independent of the statistical methodology.

In the second stage, earnings are analyzed for those who reported their earnings. Using the “human capital earnings function,” a standard technique for analyzing earnings, the natural logarithm of annual earnings as reported in the NJPS 2000/2001 is regressed on a standard set of explanatory variables, including years of schooling, years of labor market experience, marital status, region in the United States, residence in a metropolitan area, and nativity (country of birth). On the basis of previous research for the United States on adult men, it is hypothesized that earnings increase with skill level, that is, earnings increase with years of schooling (at about 10 percent per year in the 2000 Census) and increase at a decreasing rate with years of on-the-job training (labor market experience after leaving school) (Chiswick and Miller 2008). Married men tend to earn more (about 25 percent more) than men who are not married. Earnings are lower in general among men in the United States who live in the Southern states and outside of metropolitan areas, although there is reason to believe (because of “ethnic goods”) that reported earnings among Jews would be higher in the Southern states (Chiswick and Miller 2005). Earnings tend to vary by country of birth and motive for migrating, with refugees arriving as adults earning less, other variables being the same, than other immigrants. The main adult, but not aged, refugee group among Jews in the contemporary United States would be those born in the former Soviet Union, who would be expected to earn less than other foreign-born Jews (Chiswick and Wenz 2006).

Several variables that are unique to the NJPS for the study of Jews are added to the analysis to determine their effects on earnings. These pertain to Jewish denomination (both when raised and currently), Jewish education (whether attended a full-time Jewish “day school” or Yeshiva), and frequency of synagogue attendance.

Consider the following model of human capital formation. Those who experience a longer school day, who are exposed to a dual-language or bilingual education program, and who are engaged in a curriculum that emphasized textual analysis will acquire more human capital from school. Alternatively, students who can succeed in such a challenging school environment may be of a higher level of ability or motivation. Both would suggest that, other measured variables the same, those who attended a Jewish day school or Yeshiva would have a higher level of human capital and earn more.

In addition, up to a point, a greater degree of religiosity may be expected to result in higher earnings as participation in religious activities tends to be spiritually uplifting and associated with avoiding harmful behavior (e.g., alcoholism, illicit drugs, marital instability, etc.). Beyond some point, however, greater religiosity encourages investments in religious human capital that are at the expense of (rather than a complement to) secular human capital. Furthermore, while up to a point there

may be positive labor market benefits from religious participation, beyond some point the greater time devoted to religious participation and a narrowing of the scope for interaction with members of other groups and the secular world (e.g., in the extreme, as in cults and sects) would detract from labor market earnings (Iannaccone 1992). This suggests a nonlinear effect of religiosity (measured here by frequency of synagogue attendance) on earnings, that is, earnings would increase with religiosity up to a point, after which it would decline.

The analysis of earnings is performed in two ways, using OLS and using the Heckman selectivity correction technique to adjust for sample selection bias due to the non-reporting of earnings.

Statistical Analysis

Descriptive Statistics

Appendix Table 15.5 lists the dependent and explanatory variables used in this analysis, defines these variables, and indicates the relevant questions from the NJPS 2000/2001. Chiswick and Huang (2008), lists the sample size, and descriptive statistics (mean, standard deviation, and minimum and maximum values) of the variables used in the analysis.

The American Jewish men have a high level of schooling, a mean of 15.7 years, and are older, 44 years, than the general population of adult white men in the United States. Nearly two-thirds are currently married (62 percent), nearly all (90 percent) live in metropolitan areas, and less than a quarter (23 percent) live in the 17 Southern states and the District of Columbia. About 15 percent were foreign born, with one-third of these from the former Soviet Union, nearly one-third from other developed countries (primarily Europe), and about 10 percent born in Israel. By occupation, over half (54 percent) are in professional and managerial jobs, with 21 percent in sales and clerical jobs, and 10 percent in blue-collar work, with another 15 percent in other occupations, no occupation, or it was not reported.³ The self-employed, who can be in any occupation, comprise 15 percent of the men in the sample.

Analysis of Reporting of Earnings

Table 15.1 is an analysis (using OLS in Columns 1 and 2 and logit analysis in Column 3) of the determinants of who reported earnings among adult male respondents who worked in the year prior to the NJPS survey. The dependent variable is

³For an analysis of the occupational distribution and self-employment of American Jewish men in the 1990 and 2000/2001 NJPS in comparison to non-Jewish white men in the U.S. Census, see Chiswick (2007).

Table 15.1 Determinants of responding to earnings question among adult male respondents who worked, NJPS 2000/2001^a

	OLS	OLS	Logit (Marginal Effect)
Schooling (years)	-.005 (.65)	-.005 (.67)	-.005 (.64)
Age (years)	-.037 (2.63)***	-.037 (2.66)***	-.044 (2.64)***
Age squared	.0003** (2.20)	.0004 (2.23)**	.0004 (2.32)**
Widowed	.115 (.91)	.112 (.89)	.103 (.89)
Divorced	.064 (1.16)	.063 (1.13)	.061 (1.17)
Separated	.201 (2.00)**	.211 (2.11)**	.191 (2.26)**
Never married	.034 (.79)	.036 (.83)	.039 (.83)
Self-employed	-.036 (.89)	-.035 (.84)	-.035 (.86)
Sales & clerical	.072 (1.80)*	.071 (1.78)*	.075 (1.82)*
Blue-collar jobs	-.023 (.33)	-.025 (.37)	-.024 (.34)
Occupation unspecified	-.065 (.97)	-.064 (.96)	-.067 (.97)
South	-.115 (2.42)**	-.126 (2.50)**	-.132 (2.47)**
Metro	-.020 (.29)	-.012 (.17)	-.013 (.18)
Foreign born	-.032 (.63)	-.024 (.48)	-.023 (.45)
Interview time trend	-.0005 (.19)	-.0005 (.18)	-.0006 (.22)
Concentration ratio		-.001 (.98)	-.001 (.96)
Constant	1.674 (5.27)***	1.689 (5.39)***	
Observations	1278	1278	1278
R2	.06	.06	.05

Source: National Jewish Population Survey 2000/2001

^aThe dependent variable equals unity if the respondent reported his earnings, otherwise it is zero. Robust *t*-statistics in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%. All the regressions are weighed using respondent weights

coded as 1 if the respondent answered the question on earnings, and as zero if earnings were not reported. The explanatory power of the equation is very low, only 6 percent. Very few variables are statistically significant. Responding to the earnings question is unrelated to educational attainment, nativity, the density of the Jewish population in the state (the concentration ratio in Table 15.1, Column 2), and whether the respondent lives in a metropolitan area. The propensity to respond is greater among those in sales and clerical occupations than among those in other jobs. Responding decreases with age, and is greater for those who are separated compared to those currently married (the benchmark). It is less common among Jews in the South. Overall, however, the non-reporting of earnings appears to be largely random.

Analysis of Earnings

The regression analysis of earnings is reported in Table 15.2 using OLS and in Chiswick and Huang (2008) Appendix E using the Heckman selectivity technique to correct for sample selection bias, in this case, that the respondent reported earnings. The selection equation is based on Table 15.1, Column 2. The statistically significant positive “lambda” term in the selectivity corrected analysis indicates positive selectivity into the category of reporting earnings. That is, for unmeasured reasons, those who report their earnings have higher earnings in the NJPS than those who do not do so. It is clear, however, that the adjustment for selectivity does not have any substantive effects on the interpretation of the findings for the explanatory variables in the analysis of earnings. Hence, they are not discussed further in this article.

The equations in Table 15.2, Columns 1–3, parallel equations typically computed for adult men in the general U.S. labor market. Years of schooling has a highly statistically significant effect on earnings. Earnings increase by about 11 percent for each additional year of schooling in the OLS analyses and by about 10 percent in the selectivity corrected analyses. Earnings increase at a decreasing marginal rate for each additional year of labor market experience. Although only the squared experience term in Table 15.2 is statistically significant, the set of experience variables is statistically significant. In this table, earnings increase by about 2 percent per year during the early years in the labor market, and the effect diminishes slightly with a longer experience in the labor market. Men who are currently married earn about 26 percent more than men who never married, other variables being the same, and they earn about 5 percent more than previously married (widowed, divorced, separated) men, but this latter difference is not statistically significant. These findings are of the same order of magnitude as the effects on earnings for the general native-born white male population in the 2000 Census (Chiswick and Miller 2008).

At arrival the foreign-born Jewish men earn about 23 percent less than U.S.-born Jewish men, but the gap narrows by about one percentage point per year that the immigrant has lived in the United States (Table 15.2, Column 1). This suggests an

Table 15.2 The determinants of earnings (OLS) among adult male respondents, NJPS 2000/2001^a

	(1) Nativity Status	(2) Country of Birth	(3) Country of Birth	(4) Denomination Raised	(5) Current Denomination	(6) Current Denomination
Schooling (years)	.110 (8.62)***	.113 (8.87)***	.113 (8.85)***	.108 (8.00)***	.111 (8.26)***	.109 (8.02)***
Experience (years)	.022 (1.52)	.022 (1.53)	.022 (1.53)	.024 (1.63)	.021 (1.41)	.021 (1.41)
Experience squared	-.0050 (-1.65)*	-.0051 (-1.66)*	-.0051 (-1.66)*	-.00055 (-1.73)*	-.00044 (1.40)	-.00043 (-1.36)
Widowed/divorced/ separated	-.062 (-.66)	-.054 (-.60)	-.054 (-.60)	-.039 (-.41)	-.060 (-.63)	-.055 (-.57)
Never married	-.273 (-3.41)***	-.281 (-3.45)***	-.281 (-3.45)***	-.267 (-3.27)***	-.271 (-3.36)***	-.267 (-3.27)***
Foreign born	-.288 -1.52)					
Years since migration	.010 (1.76)*	.004 (.49)	.003 (.46)			
South	.017 (.19)	.024 (.29)	.024 (.29)	.032 (.39)	.006 (.07)	.005 (.07)
Metropolitan area	-.102 (-.73)	-.104 (-.74)	-.104 (-.74)	-.122 (-.85)	-.086 (-.61)	-.095 (-.67)
Developed countries		.106 (.34)	.108 (.34)			
Former Soviet Union (FSU)		-.365 (-2.59)***	-.377 (-1.67)**			
Israel		.180 (.49)	.182 (.49)			

earnings “catch-up” at about 20 years to 25 years of residence among the immigrants. When specific regions of birth are separately identified it appears that only those born in the former Soviet Union, disproportionately refugees, have earnings that differ significantly, and substantially, from those of the Jews born in the United States (Table 15.2, Columns 2 and 3). Those from the other developed countries, Israel, and less developed countries had a longer period of residence in the United States and they essentially closed the earnings gap, in contrast to the recently arrived immigrants from the former Soviet Union (Chiswick and Wenz 2006).

Thus far, the analysis for Jewish men has paralleled analyses for adult men in general in the U.S. labor market. The results for schooling, labor market experience, marital status, and nativity are quite similar to the results for the general labor market. It should be noted, however, that while in the general labor market the earnings of white men are lower in the South and higher in metropolitan areas, there is no effect of region among Jews. This implies that compared to nonJews living in the same areas, Jewish men earn relatively more in the South and in nonmetropolitan areas. That is, Jewish men appear to earn more in areas where there are relatively fewer Jews. This is consistent with Jews requiring a wage premium to live and work in areas where there is a smaller or nonexistent Jewish community. This may be due to the higher cost of Jewish-specific “ethnic goods,” defined broadly, in such areas (see Chiswick and Miller 2005).

The last three columns in Table 15.2 add one of the variables that are unique to the NJPS data, that is, the denomination in which the respondent was raised and the current denomination. The detailed list of denominations identified in the NJPS was collapsed into six categories (see Appendix Table 15.5). Contemporary American Judaism is a decentralized congregation-based religion with three major synagogue movements, Reform, Conservative, and Orthodox. These movements are confederations of synagogues that are managed by their congregants, rather than by central authorities. Each of these movements has evolved its practices over the past century and individuals are free to join any synagogue that they wish. Reform Judaism, originally the product of mid-nineteenth-century German Jewish immigrants, relaxed many of the “traditional” laws and customs to “Americanize” Judaism. Although many of its “reforms” have been reversed, it is still the least time-intensive denomination, imposes the fewest restrictions on the behavior of adherents, and generally requires of its congregants the least Jewish human capital (e.g., knowledge of Hebrew, the laws and customs, and prayers). Conservative Judaism, established in the early twentieth century as a reaction to the Reform movement, sought to “conserve” elements of traditional practice while at the same time adapting to the Americanization of its congregants. Although Orthodox Judaism has its sub-denominations (e.g., Modern Orthodox, Hasidim), it adheres more closely to the “traditional” religious practice of late-nineteenth-century Eastern Europe, requires more time for ritual practice, and for full participation generally requires of its congregants more Jewish human capital than Conservative Judaism. The Orthodox are more likely to live in close communities because of the need to be near synagogues (e.g., riding and handling money is proscribed on the Sabbath and certain major holidays), Jewish schools, and for other ethnic goods (e.g., kosher foods).

The Conservative Jews serve as the benchmark for the denominations in Table 15.2. When the analysis is performed using denomination raised, Conservative Jews have the highest earnings, but their earnings do not differ significantly from those who say they were raised Orthodox or Reform. Those who reported that they were raised “just Jewish,” secular, or non-Jewish have significantly lower earnings, with the latter two categories having earnings that are lower by about 40 percent compared to Conservative Jews.⁴

Denomination raised can be different from current denomination because of movements across these categories (see Chiswick and Huang 2008, Appendices C and D). Some become less attached, while others become more attached to traditional religious practice. Considering current denomination, only the Orthodox and the secular Jews have earnings that are statistically different from the Conservative Jews, about 30 percent lower earnings for each group. The non-Jews in the sample have much lower earnings, but the difference is at the margin of statistical significance. Converts to Judaism, that is, men who were not born Jewish but who converted to Judaism, have substantially lower earnings, but as with those currently not Jewish, the small sample size may be responsible for the lack of statistical significance (Table 15.2).

Data are also available in the NJPS 2000/2001 on whether the respondent received any Jewish education while in Grades 1–7 or in Grades 8–12, and, if so, the type and number of years of this Jewish education. The “first mentioned” type of Jewish education in each age group is taken to be the predominant one in that age group.⁵ The responses on type were recoded into three dichotomous variables: *Day School* (full-time Jewish day school or Yeshiva, or for very few Israeli secular/public schooling), *Other Jewish Education* (e.g., part time or one day a week, Bar/Bar Mitzvah lessons, Jewish studies in public/private school, Jewish home schooling), and *None* (no Jewish education or only nursery/kindergarten or Jewish summer camp). The type of Jewish schooling received was strongly related to the denomination in which the respondent was raised, with those raised Orthodox receiving the most (particularly day school), and those raised just Jewish or secular the least (Table 15.3).

Jewish day schools involve a longer school day than do the public schools as students learn both the secular (general) curriculum that they would be exposed to in public schools and the Jewish curriculum, including Hebrew, religious studies, prayers, Jewish culture and history, etc. In addition to the broader range of studies, and the bilingual program, the curriculum requires greater analysis of texts,

⁴In a study of Protestants, Lehrer (2010) finds that those unaffiliated as adults have wages significantly lower than those of mainline Protestants. She also finds (Lehrer 2006) that young people who grow up with no religious affiliation achieve a lower level of schooling.

⁵Most male respondents in the NJPS reported only one type of Jewish education. Of the 3111 respondents who reported receiving Jewish education in Grades 1–7, only 358 (11 percent) reported a second type, 57 reported a third type and 6 reported four types. For Grades 8–12, of the 1591 respondents who received Jewish education, only 75 (5 percent) reported a second type, 10 a third type, and 2 a fourth type. Source: NJPS, 2000/2001.

Table 15.3 Type of Jewish education received while in grades 8–12, by Denomination Raised, Adult Jewish Men, NJPS, 2000/2001^a

Denomination	Type of Jewish Schooling (Percent)			
	Day school	Other	None	Total
Orthodox	46	21	33	100
Conservative	7	40	52	100
Reform	0	42	58	100
Just Jewish	4	12	83	100
Secular	7	5	87	100

Source: National Jewish Population Survey, 2000/2001

^aFirst mentioned type of Jewish education. Detail may not add to total due to rounding

discipline, and learning to engage in multitasking. While networks may be formed in Jewish day schools it is not obvious that these would have a positive effect on earnings compared to networks formed in public schools.

When the two sets of variables for type of Jewish schooling in Grades 1–7 and in Grades 8–12 were entered into the earnings equations (with no Jewish schooling serving as the benchmark), the separate coefficients were not statistically significant, in part due to multicollinearity. When only the Grades 8–12 Jewish schooling variables were entered, attending a Jewish day school had a significant positive effect on male earnings in the equation where current denomination was held constant (Chiswick and Huang 2008, Appendix F).⁶ Other Jewish schooling was not statistically significant. Compared to those with no Jewish education, men who reported attending a Jewish day school for at least some time in Grades 8–12 had earnings about 30 percent higher than those who had no Jewish education (coefficient = 0.29, t-ratio = 2.2) (Chiswick and Huang 2008). The “other Jewish education” variable has a very small coefficient and is not statistically significant (coefficient = 0.032, t-ratio = 0.42) in the equation where current denomination is held constant.

The dichotomous variable for day school education in Grades 8–12 can be replaced by a continuous variable for the number of years of this schooling (zero to five years). In the current denomination equation its coefficient implies an increase in earnings among Jewish men of 6 percent per year of Jewish day schooling (Grades 8–12), which is statistically significant at the 10 percent level (coefficient = 0.059,

⁶In an analysis of the effects of attending a Catholic secondary school among young adult men, Neal (1997) finds that it increases the probability of completing high school and college among whites and minorities. Controlling for schooling level, it has a positive but statistically insignificant effect on the wages of white men, but a large positive and highly significant effect for black and Hispanic men. Neal (1997) speculates that the large wage effect is due to the higher quality of the Catholic schools than the urban public schools that the minorities would otherwise attend. This interpretation would not be relevant for explaining the higher earnings of Jews who attended Jewish day schools. The Jews who did not go to day schools for their high school education attended public secondary schools, primarily in the suburbs or in middle-income urban neighborhoods, and not in low-income, low-quality of education urban areas.

t-ratio = 1.74). The coefficient of total schooling remains at 11 percent ($t = 7.84$). Thus, controlling for current denomination and other variables, Jewish day schooling at the secondary level is associated with higher earnings than secular schooling. The only dramatic changes in the coefficients of the other explanatory variables when the Jewish education variables (Grades 8–12) are added to the equation are the increase in the negative effect (and the increase in its statistical significance) on earnings of currently being Orthodox or currently being secular. These coefficients imply that a currently Orthodox Jewish man who attended a day school (including Yeshiva) in the 8–12 grades had earnings 15 percent below that of a currently Conservative Jew who did not attend a day school, while a currently Orthodox man who did not attend a day school had an even greater earnings disadvantage (coefficient of -0.477). Currently secular Jews, who would have been far less likely to have attended a full-time Jewish school, have very low earnings (coefficient -0.419) compared to otherwise comparable Conservative Jewish men who also did not attend a day school.

It appears, therefore, that the type of Jewish education men received does have an association with earnings in the labor market. Receiving part-time Jewish education neither enhances nor detracts from Jewish men's earnings, but attending a Jewish day school or Yeshiva for secondary school is associated with substantially greater labor market earnings of about 6 percent per year of this day schooling, over and above the effect of total years of schooling.

This suggests that full-time Jewish education enhances earnings because of the complementarity of Jewish focused education and secular studies, perhaps because of the dual curricular program (general and Jewish studies), the longer school day, the emphasis on learning a second language (in this case Hebrew), or an emphasis on learning the analysis of texts (Chiswick 2006). Given the limitations of the data, however, it is not possible to control for potentially important determinants of day school education, such as a higher innate ability or parental income.

The variables for denomination can be replaced by a measure of religiosity, namely, the frequency with which the men attended synagogue services last year. Synagogue attendance is greatest for those reporting their current denomination as Orthodox and least for those who report they are secular. The data on frequency were provided in categories and were recoded as *None* (did not attend at all), *Seldom* (a few days in the year), *Monthly* (once to three times a month), *Weekly* (once a week), and *More than weekly*. Using monthly attendance as the benchmark, there is no effect on the earnings of Jewish men of not attending or attending only seldom, earnings are significantly greater among weekly attendees, and earnings are lower (although not always significantly so) among those attending more frequently than weekly (Table 15.4). These patterns are largely invariant with respect to whether the Jewish education variables are held constant.

These yearly attendance categories can be transformed into days per year, and entered into the earnings equation in a quadratic manner (Table 15.4). The linear term has a positive coefficient and the squared term has a negative sign. The coefficients imply a "peak" of earnings at about 145 days per year, or less than three days per week.

Table 15.4 Partial effect of synagogue attendance on earnings, Adult Jewish Men, NJPS, 2000/2001^a

Frequency ^b	No Control for Jewish Schooling	Control for Jewish Schooling
None	-.663 (-.53)	-.099 (-.91)
Seldom	.062 (.52)	.022 (.20)
Weekly	.361 (2.02)	.291 (1.64)
More than weekly	-.202 (-1.02)	-.357 (-1.98)
Days per year		
Days	.00349 (1.99)	.00292 (1.50)
Days squared	-.000012 (-2.19)	-.000012 (-2.06)

Source: National Jewish Population Survey, 2000/2001

^aControlling for the variables in Table 15.2, Column 3, except denomination

^bMonthly is the benchmark

The synagogue attendance data imply that men who attend every week or about three days a week have higher earnings than those who attend less often, but that earnings decline with a greater frequency (e.g., daily) of attendance.

Summary and Conclusions

This chapter has been concerned with an analysis of earnings among adult (age 25–64) Jewish men as reported in the NJPS, 2000/2001.

The analysis begins with a study of who did not respond to the question on earnings. Nonresponse is unrelated to education level. Those in sales and clerical jobs are more likely to report their earnings than the professionals and managers, possibly because they are more likely to be salaried workers and know their earnings with greater certainty. Older workers and those living in the South are less likely to report earnings, and those who are separated from their wives are more likely to respond. Overall, however, there appears to be little systematic pattern in which men did not respond to the question on earnings.

Among Jewish men, earnings are positively related to schooling (by about 11 percent per year of schooling), labor market experience, and being currently married. The signs and magnitudes of these effects are quite similar to those found in the general male population. Other variables the same, only those from the former Soviet Union, the most recent group of Jewish refugees, earn less than Jews born in the United States. The Soviet Jews have labor market experiences consistent with their being disproportionately recent refugees.

Earnings are associated with denomination. Men raised “just Jewish” or secular have earnings significantly lower than those of Conservative Jews. Those currently Orthodox or secular have earnings significantly lower than currently Conservative Jews. The earnings for other Jews (Reform or “just Jewish”) are lower than those of currently Conservative Jews, other measured variables the same, but the differences are not statistically significant.

The labor market earnings of Jewish men appear to be associated with Jewish education. In the analysis that includes current denomination, those who attended a full-time Jewish school (day school, Yeshiva, or Israeli school) at least part of the time in Grades 8–12 report significantly higher earnings, by about 30 percent. Earnings are increased by about 6 percent per year of Jewish day schooling in Grades 8–12, holding total years of schooling constant. Compared to a man who is currently a Conservative Jew who did not attend a day school, the earnings gap with the currently Orthodox is narrowed if the latter attended, and is widened if he did not attend a day school. The earnings disadvantage of currently secular Jews is increased if, as is typically the case, they did not attend a Jewish day school. Part-time Jewish education appears to have no effect on male earnings. The Jewish day school effect may be due to its dual curriculum, that is, secular studies and religious education, including learning Hebrew. It requires a longer school day and results in the acquisition of more human capital. The earnings effect may also reflect that those who persist in these studies have higher levels of innate ability.

The data on frequency of synagogue attendance suggest a nonmonotonic effect on earnings. Other variables the same, earnings are greater for men who attend once a week or a couple of times a week, but are lower for those who attend less frequently or more frequently (nearly daily). These findings suggest a nonlinear effect of religious practice among Jewish men on their labor market outcomes. Those who are raised without a religious involvement or who as adults are not religiously involved have lower earnings. This suggests that religious involvement as a youth and as an adult is associated with more favorable labor market outcomes. Yet, the less favorable findings for the Orthodox, other variables being the same, and those who attend the synagogue daily, suggests that beyond some point religious practice has a negative effect on labor market earnings. This may arise because, beyond some point, time and effort devoted to religious activities detract from the time and/or effort devoted to the labor market. Or, it may be that to maintain an Orthodox life style self-imposed restrictions (on where one lives and works, the days of the week one works, as well as choice of occupation, etc.) limit earnings (Chiswick and Miller 2005). Discrimination in the labor market against the Orthodox might also be a factor.

The analysis indicates that in spite of the high rate of refusal to answer the question on earnings, insights can be gained regarding who refused to report their earnings and the determinants of earnings by including a question on individual earnings in communal and national surveys of American Jews, and in comparable surveys for other groups defined by religion or ethnicity.

Appendix A

Table 15.5 Description of variables, NJPS 2000/2001

Variables	Explanations	Question for NJPS 2000/2001
<i>Dependent variables</i>		
Earnings	Earnings data are constructed from a categorical variable (Q299_A) using a midpoint method. (If the earnings are, for example, between \$15,000 and \$19,999, a value of \$17,500 is assigned. The value for the highest category is obtained by multiplying its lower bound by 1.5.)	Q299_A
Log earnings	Natural logarithm of earnings	Q299_A
Answer earnings question	A dichotomous variable with 1 indicating those who answered the earnings question, 0 indicating those who refused to answer	Q299_A, Q286_A1
<i>Explanatory variables</i>		
Demographic variables		
Schooling (years)	Years of schooling	Q030_A1
Age (years)	Age	Q007AB_A
Experience (years)	Experience = Age - Schooling - 5	
Married	Currently married, spouse present	Q066_A
Widowed/ divorced/ separated	Currently widowed, divorced, or separated	Q066_A
Never married	Never married	Q066_A
Marital status missing	Marital status missing	Q066_A
Widowed	Currently widowed	Q066_A
Divorced	Currently divorced	Q066_A
Separated	Currently separated	Q066_A
South	A dichotomous variable with 1 indicating if the respondent resides in one of the states in the South	ZIPCEN4
Metropolitan	A dichotomous variable with 1 indicating residing in a metropolitan area	METSTA
Concentration ratio	The percentage of respondents in a particular state among all NJPS 2000/01 respondents	STATE
Foreign-born status		
Foreign born	A dichotomous variable with 1 indicating those who were not born in the U.S	Q052_A
Years since migration	Year since migration = 2000.5 - Q055_A (year came to the US)	Q052_A
Foreign country of birth		
Former Soviet Union	Countries that were part of the former Soviet Union	Q054_A

(continued)

Table 15.5 (continued)

Variables	Explanations	Question for NJPS 2000/2001
Israel	Israel.	Q054_A
Developed countries	European countries (exclude the former Soviet Union), Canada, Australia, New Zealand, Japan, and South Africa	Q054_A
Less developed countries	Latin America, Middle East (excluding Israel), Africa (excluding South Africa), and Asia (excluding Japan)	Q054_A
Country missing	Country of birth missing (foreign born)	Q054_A
Convert to Judaism	Those who are not born Jewish but converted to Judaism	Q018_A
Current Jewish denomination		
Conservative	Conservative, Conservadox; reconstructionist	Q114_A1-Q114_A7
Orthodox	Hasidic, Lubavitch, Satmar, Haredi; Orthodox, Traditional (Jewish)	Q114_A1-Q114_A7
Reform	Reform and Liberal (Jewish); postdenominational, Jewish renewal	Q114_A1-Q114_A7
Just Jewish	Just Jewish, Sephardic, Israelite /Hebrew, no Jewish denomination, other Jewish	Q114_A1-Q114_A7
Secular	Secular, ethnically/nationality Jewish, culturally Jewish, humanistic Jews, nonpracticing Jews; Jewish by background/birth/heritage, agnostic, atheist, no religion/none/ (nothing Jewish), other	Q114_A1-Q114_A7
Non-Jewish	Messianic (e.g., Jews for Jesus), Catholic, Protestant, Mormon, and other Christian religions	Q114_A1-Q114_A7
Denomination missing	Current Jewish denomination missing	Q114_A1-Q114_A7
Jewish denomination raised		
Conservative	Conservative, Conservadox; Reconstructionist	Q115_A1-Q115_A5
Orthodox	Hasidic, Lubavitch, Satmar, Haredi; Orthodox, Traditional (Jewish)	Q115_A1-Q115_A5
Reform	Reform and Liberal (Jewish); postdenominational, Jewish renewal	Q115_A1-Q115_A5
Just Jewish	Just Jewish, Sephardic, Israelite /Hebrew, no Jewish denomination, other Jewish	Q115_A1-Q115_A5
Secular	Secular, ethnically/nationality Jewish, culturally Jewish, humanistic Jews, nonpracticing Jews; Jewish by background/birth/heritage, agnostic, atheist, no religion/none/ (nothing Jewish), other	Q115_A1-Q115_A5
Non-Jewish	Messianic (e.g., Jews for Jesus), Catholic, Protestant, Mormon, and other Christian religions	Q115_A1-Q115_A5
Denomination missing	Current Jewish denomination missing	Q115_A1-Q115_A5

(continued)

Table 15.5 (continued)

Variables	Explanations	Question for NJPS 2000/2001
Jewish education		
Grade 1–7: Day school	“A full-time Jewish day school or Yeshiva” or “Israeli secular/public school”	Q168_A, Q169_A1-Q169_A4
Grade 1–7: Other Jewish education	“A one-day-a-week Jewish education program/Sunday school” or “a part-time Jewish school that met more than once a week” or “private tutoring” or “Yiddish school/Workman’s circle/ arbiter ring” or “other informal Jewish education” or “Jewish studies in public/private school” or “Jewish home schooling” or “unspecified Jewish/Hebrew studies”	Q168_A, Q169_A1-Q169_A4
Grade 1–7: None	Did not have Jewish education, or Jewish education type is “summer camp” or “Jewish nursery/ kindergarten”	Q168_A, Q169_A1-Q169_A4
Grade 8–12: Day school	“A full-time Jewish day school or Yeshiva” or “Israeli secular/public school”	Q171_A, Q172_A1-Q172_A4
Grade 8–12: Other Jewish education	“A one-day-a-week Jewish education program/Sunday school” or “a part-time Jewish school that met more than once a week” or “private tutoring” or “Yiddish school/Workman’s circle/ arbiter ring” or “other informal Jewish education” or “Jewish studies in public/private school” or “Jewish home schooling” or “unspecified Jewish/Hebrew studies”	Q171_A, Q172_A1-Q172_A4
Grade 8–12: None	Did not have Jewish education, or Jewish education type is “Summer Camp”	Q171_A, Q172_A1-Q172_A4
Years day school (Grades 8–12)	Years of day school (Grades 8–12)	Q173C_A, Q173G_A
Occupation categories		
Professional & managerial	Professional and managerial occupations	Q289_A
Sales & clerical	Sales, offices, services occupations	Q289_A
Blue-collar jobs	Farming, construction, transportation, and production occupations	Q289_A
Occupation unspecified	Occupation unspecified	Q289_A
Occupation not asked	Occupation not asked	Q289_A
Self-employed	Self-employed status	Q293_A
Interview time trend	Interview time trend	REPLIC

Source: National Jewish Population Survey 2000/2001

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Part V

Ordinary People, Extraordinary Outcomes

Part V consists of two chapters. Chapter 16, “The Economic Progress of American Jewry: An Overview,” summarizes and integrates the empirical findings and analyses in the previous chapters on the educational attainment, labor supply, occupational status, and earnings of American Jews. It also includes additional material on the historical pattern of the self-employment of American Jews, as well as a discussion of their level of (non-human) assets or wealth compared to other Americans. In doing so, it hints at possible reasons for their extraordinary educational and economic achievements.

Chapter 17, “Epilogue: Why the Jews Flourished in America,” elaborates on alternative explanations or hypotheses for American Jewish economic success and discusses their merits and pitfalls. These hypotheses include the greater degree of free markets, competition and liberty in the American economy and society, the “Diaspora Hypothesis” regarding types of investment, the “quantity/quality” (numbers/investment per child) tradeoff regarding children, and the religious/cultural emphasis on education and analytical reasoning or decision-making skills. The analysis indicates that none of these hypotheses by themselves can explain this achievement. A combination of the freedom offered Jews in America and the religious/cultural emphasis on education and decision-making skills were both necessary and were sufficient to explain these phenomenon.

This chapter, and the book, closes with a discussion of future prospects for the relative educational and economic attainment of American Jewry. As they become more distant from their immigrant ancestors, and more assimilated and more welcome in the broader American culture, will Jews be able to maintain their relatively high level of educational attainment and economic success? What will be the implications of patterns of low fertility and of increased intermarriage for both the comparative demographic profile and the educational and economic future of American Jewry?

While the future is notoriously hard to predict, the methodologies developed in this book provide a pathway for the study of future generations of Jews, and other minorities, in the United States and elsewhere.

Chapter 16

The Economic Progress of American Jewry: An Overview



Barry R. Chiswick

Introduction

From the eighteenth century to the present, the American Jewish community has experienced remarkable economic advancements relative to the non-Jewish population of the United States. It is an achievement that is perhaps unprecedented in terms of the various racial, ethnic, and religious groups that compromise the American population. It may also be unprecedented in terms of world-wide modern Jewish history.¹

Most contemporary American Jews are the descendants of the mass migration of Jews who immigrated from Eastern Europe and Russia during the period 1881–1921. At arrival these Jewish immigrants were predominantly Yiddish speakers with at best little formal schooling, who worked primarily in retail trade or in craft, operative and laborer jobs in small establishments in light manufacturing, and were characterized by having low earnings. In contrast, their descendants are now nearly fully integrated into the American economic mainstream, with high levels of proficiency in English, high occupational levels (mainly professionals and managers), high earnings, and high levels of wealth compared to most other Americans.

This is a revision of the original article published in Aaron Levine, ed. *Oxford Handbook of Judaism and Economics*, New York: Oxford University Press, 2010, pp. 625–645.

¹The American Jewish community, which currently comprises about two percent of the US population, accounts for about 40 percent of world Jewry, with another 43 percent living in Israel, and the remaining 17 percent in other Diaspora countries (DellaPergola 2016, p. 294, Table 7.6).

For studies of the economic achievement of Jews in several Diaspora countries, see for example, Elazar and Medding (1983), Prais and Schmool (1975), Darvish (1985), Syrquin (1985), O'Grada (2006), and Tomes (1983).

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This overview chapter uses data from the previous chapters, as well as additional material, to examine the economic progress of American Jews using quantitative data wherever possible. For most families, both Jewish and non-Jewish, earnings from labor market activities are the primary source of family or household income and wealth, and hence of their ability to purchase goods and services and to attain their standard of living. Because of the greater availability of data on occupation than on earnings or wealth, the focus in this chapter is on occupational status. A person's occupation is determined by many factors, including educational level, labor market experience, decision making skills, discriminatory barriers in education and in the labor market, and efforts to find niches in the economy to minimize the adverse effects of discrimination. Occupational status is also one of the most important determinants of income from the labor market.

To the extent possible in the analyses that follow Jews are compared to other whites. According to the National Jewish Population Survey and the NORC General Social Survey, 98 percent of Jews in the US report that their race is white. The economic advantage of Jews compared to non-Jews would be even greater if they were compared to others regardless of latter's race since non-whites in the US do less well on average than whites. The Jewish share of the population increased from a negligible proportion in 1860 to a peak of less than 4 percent prior to WWII and has since declined to about 2 percent. Thus, whether Jews are included or, where possible, excluded from the data on "non-Jewish" comparison groups has little impact on the non-Jewish results. Even in occupations in which Jews are disproportionately represented, they are a small minority of members of the occupation.

It is not as easy to study the economic attainment of American groups defined by religion, such as Jews, as it is to do so for many other racial and ethnic groups. The decennial Census of the United States, for example, has since 1850 been a major source of data to study occupational attainment and, since the 1940 Census, the earnings of minority groups. However, the decennial Census has never asked religion, and responses to the question on ancestry (asked since 1980) that reveal a respondent's religion are masked (U.S. Bureau of the Census 1989). The Census Office/Census Bureau did conduct two surveys that permit the identification of Jews that are discussed below. But other indirect techniques, also discussed below, can be used as proxy identifiers of Jews in some Censuses and survey data. Other US government surveys and privately conducted surveys sometimes include a question on religion, but since Jews are a small proportion of the population the sample sizes for Jews in these data are often too small for meaningful statistical analyses. Yet, where appropriate, analyses of data from these sources are reported.

Jews in the Colonial Period

The first Jewish community was established in 1654 in what was then the Dutch colony of New Amsterdam (New York City) by a small group of Ladino-speaking (Judeo-Spanish) Sephardic Jews fleeing the spread of the Inquisition as Portugal

took over the Dutch colony in Recife, Brazil (Marcus 1970, Volume II, Part IV, pp. 518–852).² These first settlers were followed during the American colonial period by small numbers of other Sephardic Jews and smaller numbers of German Jews who also settled primarily in east coast seaport cities.³ Although systematic quantitative data apparently do not exist regarding their economic status, the qualitative material indicates that they became well established middle class, urban residents.

Many of the Jewish immigrants to Colonial America arrived as indentured servants or were “redeemed” at arrival by their families already in America. They quickly joined the mainstream of the Jewish community. The Jews were typically shopkeepers, merchants and shippers living in the tidewater seaport cities. Although some were craftsmen (artisans), very few were farmers, laborers, or professionals. Wealthier than the average white American, there was a virtual absence of the very poor and the very wealthy. The Jewish merchants engaged in trade and finance (local, interior, coastal, and international – primarily with England and the Caribbean). Most were self-employed in clerical, sales, and managerial occupations. These were relatively skilled occupations at that time as literacy and numeracy were generally required. Literacy and numeracy were common in the Jewish community but not as widespread among the general population.

The historian Jacob R. Marcus writes that the international trade was facilitated by their “skill, experience and contacts with Jews in other commercial centers, particularly in the West Indies” (Marcus 1970, Volume II, pp. 843). Moreover he notes: “Though a very small percentage of merchants, the Jews *were* merchants, and a progressive and enterprising group of merchants at that” (Marcus 1970, Volume II, pp. 844, italics in original). And that: “Then, as today, an upthrusting socioeconomic mobility was characteristic of American Jewish life” (Marcus 1970, Volume II, pp. 838).

Mid to Late Nineteenth Century

Although a small number of Ashkenazic Jews arrived in the United States earlier, larger numbers started coming in the 1840’s. Changes were taking place in Central Europe, in particular, tensions associated with new political ideas and economic upheavals due to changes in the structure of their economies and recessions in the emerging industrial sectors. Together with US economic development and growth, this brought to the United States an increased number of immigrants from Central Europe, in particular from the German-speaking areas, during the 1840’s through

²For a detailed historical analysis of Jews in Colonial America, see the three volume study, Marcus 1970. For a brief discussion of Jews in Colonial America, see also Marcus 1990, Sarna (2004, Chap. 1).

³Sarna reports estimates that by 1776, there were between 1000 and 2500 Jews in the United States, that is, 0.4–1.0 Jews per thousand population (Sarna 2004, pp. 375). Marcus (1970, Volume II, pp.522) suggests that during the 1700s there were two to three thousand Jews.

the 1850's (Kohler (1901), Lestschinsky (1966), Gartner (1983), and Barkai (1986)).⁴

(a) Qualitative Evidence

Resuming the occupations many of them had in Europe, the German Jewish immigrants concentrated in retail trade, and to a lesser degree, wholesale trade. Many started their life in the US as peddlers, literally carrying their wares on their backs in all regions of the country (Diner 2015). As they prospered, they would acquire a pack animal or horse and wagon. Soon they settled down in cities and towns, large and small throughout the United States, and opened small retail establishments. This was surely an easier life than being on the road most of the time (Goodman 1951). They were not as geographically concentrated as were the earlier Colonial Jews (Atlantic coast seaport cities) or the later waves of East European/Russian Jews (New York, Chicago and other major industrial cities in the North and Midwest).

Some of these German Jewish merchants experienced considerable success, and expanded the size and number of their businesses. While most did not become department store magnates, some did in the post-Civil War period, creating such well known department stores in various parts of the country as Bloomingdale's, Gimbel's, Saks, Goldwater's, Filene's, I Magnin, and Nieman-Marcus, among others (Joselit 2004). Most, however, remained as small operators in major cities, small cities, and towns across the country. Indeed, outside of New York City, the contact that most Americans would have with Jews was in the latter's retail establishments, primarily grocery, dry goods, and small department stores (Diner 2015). This was a pattern also observed in the British Isles and other countries of overseas settlement (Diner 2015; O'Grada 2006; Mendelsohn 2014).

(b) Quantitative Evidence

The earliest systematic quantitative data on the economic status of American Jews can be derived from the recently released public use microdata files of the 1860 Census of Population, which was conducted just prior to the start of the Civil War. The Distinctive Jewish Name (DJN) technique can be applied to these Census respondents.⁵ While this approach is subject to two types of error, missing Jews without a DJN and including non-Jews with a DJN, it enables a first-cut analysis of differences between American Jews and others. Using a one-percent sample of the free white male population, these data were used to study the occupational

⁴Sarna reports estimates that the Jewish population of the United States increased from about 15,000 in the 1820's (nearly one Jew per thousand of the US population) to 230,000 to 300,000 in 1880 (5–6 Jews per thousand of the US population) (Sarna 2004, p. 375).

⁵A proxy identifier for Jews is the Distinctive Jewish Name technique (see, Himmelfarb et al. 1983, Sheskin 1998). Name changes (which were not uncommon at or shortly after immigration to the US), intermarriage, and religious conversion both in and out of Judaism weaken the effectiveness of this technique.

distribution and the determinants of socio-economic status of adult Jewish men (age 16–60) compared to other free men (this volume, [Chap. 2](#)).

The men identified as likely to be Jewish through the DJN technique were more likely to be in managerial, clerical, machine operator, and sales (especially as peddlers) occupations than other free men. They were less likely to be in professional occupations, especially as religious workers. The Jews were far less likely to be in agricultural occupations, whether as farm owners, tenants, managers, or laborers.

Multiple regression analysis was applied to study the determinants of the Duncan Socio-Economic Index (SEI) for Jewish and other free men. Similar patterns were found: The index increased with age (at a decreasing rate), literacy, being married, and living in the South, but was lower among free non-whites, the foreign-born, and those living in rural areas, especially on farms. What is most interesting is that, other determinants the same, US-born Jews did not differ significantly in their SEI from other native-born free white men, but that by 1860 foreign-born Jews – disproportionately from the German-speaking states in Central Europe – had a significantly higher SEI than other immigrants or even higher than US-born non-Jewish men.

The earliest systematic quantitative data on the economic status of American Jews with a direct identifier of Jews appears to be from a survey “Vital Statistics of Jews in the United States” conducted by the Census Office in 1890 (Billings [1890](#)). This is better known as the Billings Report, after John Shaw Billings, the head of the project and the author of the Report.⁶ Aware of the increasing immigration of Eastern European and Russian Jews in the 1880s and aware that there would be no mechanism for identifying Jews in the 1890 Census, this special survey was undertaken. It was conducted with the assistance of Adolphus Solomons, a prominent member of the Jewish community who was a businessman, philanthropist, community leader, and co-founder with Clara Barton of the American Red Cross.⁷ At Solomons’ invitation Rabbis and presidents of Jewish congregations provided the names of Jews who were then interviewed. The intent was to collect data on the vital statistics (births, deaths, illnesses) of 10,000 Jewish households over the five year period, 1885–1890. The Billings survey included a question on occupation.

The law of unintended consequences came into play because only Jews in the US for at least five years prior to 1890 were to be interviewed. Most Jews in the US by 1885 were, in fact, German Jews. Although large scale Eastern European and Russian Jewish immigration began in the early 1880’s it was only later that it turned into a mass immigration. The Billings Report indicates that of the Jews surveyed, 55 percent reported that their mother was born in Germany, while 21 percent reported that their mother was born in the US, 11 percent reported Russia or Poland, and for 13 percent it was another country or the country was not reported. The younger the respondent the more likely the mother was born in the United States, presumably primarily of German origin (Billings [1890](#), Table II).

⁶For an analysis of the Billings Report, see this volume, Chap. 3. It is apparently the only survey exclusively of Jews conducted by the Census Office, or its successor, the Census Bureau.

⁷Solomons was born in New York City of parents born in England, but of Sephardic origin (this volume, Chap. 3).

The data on the 1890 occupational attainment of the Jewish and non-Jewish men are instructive (Billings 1890, Table IV; and this volume, Chap. 3).⁸ Fully 57 percent of the Jewish men were in sales, another 20 percent in clerical occupations, and 12 percent in craft jobs, with 5 percent in professional jobs, and with only 2 percent in agriculture. By contrast, among white native-born men in general, as reported in the 1890 Census, only 2 percent were in sales, 6 percent in clerical jobs, 13 percent in craft occupations, 3 percent worked in professional occupations, and 46 percent worked in agriculture. Among the Jews in sales, most worked for themselves as peddlers, push-cart operators or owners of their own small retail outlets.

Clearly, the Jewish men in the US in 1885, predominantly of German Jewish origins, had an occupational distribution distinct from the general population. As will be seen, this occupational pattern is also quite distinct from that of the East European and Russian Jewish immigrants who arrived disproportionately in the US in the four decades from the early 1880's until the enactment of the immigration restrictions and the "national origins" quota system in 1921 and 1924.

Occupations of East European Jewish Men: Early Twentieth Century to World War II⁹

Russian and Russian/Polish Jews, predominantly Yiddish speakers, started immigrating to the US in large numbers in the early 1880s because of economic deprivation and religious persecution, and the growth of job opportunities in the US that also attracted large numbers of other Southern and East European immigrants (Boustan 2007).¹⁰

(a) Identifying Jews

Although Russian and Russian/Polish places of birth were recorded in the 1890 Census, most of the original records of the first Census that would include many Jews from these origins were destroyed in a fire (Blake 1996). Thus, modern data files constructed from decennial Census records for other years cannot be created for the 1890 Census. As a result, the earliest Census in which a sufficient number of East European and Russian Jews can be identified is 1900 by using a Russian or Russian/Polish birthplace or parental birthplace as a crude Jewish identifier.¹¹

⁸The data on the general male population for the 1890 Census are from a Census Office volume published in 1897 (U.S. Census Office 1897, pp. 118–119).

⁹The data on occupational attainment are drawn from this volume, Chap. 6.

¹⁰"In 1881, 4.1 million Jews lived in the Russian empire. Over the next three decades 1.5 million Russian Jews immigrated to the United States, and another 0.5 million left for other New World destinations, a mass migration surpassed in strength only by the Irish earlier in the century" (Boustan 2007, p. 267).

¹¹For analyses of the validity of using the Russian origin method for identifying Jews, see Ritterband (1998) and Rosenthal (1975).

Another Jewish identifier that came into the Census in 1910 and remained through the 1970 Census is “mother tongue”.¹² Although the exact wording varied from Census to Census, the basic question was identifying a language other than or in addition to English that the respondent spoke at home when the respondent was a child.¹³ Yiddish, Hebrew, and Ladino can be used as Jewish identifiers in that those who reported one of these languages have a high probability of being Jewish, and very few non-Jews would report these languages.¹⁴ Yet, the limitation of the Jewish mother tongue approach is that many Jews, particularly those from Germany and other parts of Western Europe, and especially those with parents born in the US, would not report any of these Jewish languages.

Using the Russian–origin technique (which, of course, includes non-Jews of Russian origin) and the Yiddish mother tongue technique (which, of course, misses many Jews) it is possible to identify Eastern European and Russian Jewish immigrants and their US-born children from the turn of the century up to World War II (see, this volume, Chaps. 4 and 6). These techniques are of lesser value in the post-WWII period, but some other data sources with direct Jewish identifiers are available.¹⁵

(b) Occupational Attainment

In 1910, for example, among adult Yiddish mother tongue immigrant men, 9.6 percent were in professional and managerial jobs, 27.1 percent in sales jobs, 31.7 percent in craft employment, and 22.3 percent in operative jobs. Few were in clerical (2.5 percent), service (2.4 percent), or laborer (3.6 percent) jobs, and negligible numbers were in agriculture. Among foreign-born men who were not Jewish, only 5.6 percent were in professional and managerial jobs, only 6.8 percent in sales, with 2.5 percent in craft, and 17.6 percent in operative jobs. Many worked as laborers (23.5 percent) or in agriculture (13.1 percent). The East European Jewish immigrants were in somewhat higher occupational categories than those of other immigrant men, nearly all of whom were also from Europe.¹⁶

¹²For analyses of the validity of the “mother tongue” method of identifying Jews, see Kobrin (1983) and Rosenwaike (1971).

¹³Since the 1980 Census of Population the language question in the Census and the American Community Survey refers to languages currently spoken at home.

¹⁴Originally only Yiddish was coded by the Census Bureau, but Hebrew and Ladino were later added to the codes. Ladino is the origin language of Sephardic Jews. The last time mother tongue was asked (1970 Census) very few respondents indicated either Hebrew or Ladino.

¹⁵It is estimated that the Jewish population of the US increased to nearly one million in 1900 (about 1.3 percent of the US population), to nearly five million just prior to World War II (a peak of about 3.7 percent of the population), to about 5.3 million in 2000 (just under 2.0 percent of the population) (Sarna 2004, p. 375). The slow growth of the Jewish population since the passage of immigration restrictions in the 1920’s is due to both low immigration and a below replacement fertility rate in more recent decades.

¹⁶Douglas (1919, p 393) comments on the higher occupational status of Jewish immigrants as reported at entry into the United States. He notes that “... the Jews are the most skilled of the newer races.”

The occupational differences between Jewish and other white men in 1910 are even greater when second-generation Jewish men (born in the US with a Yiddish mother tongue and one or both parents foreign born) are compared with native-born white men. Among the Jewish men, identified by mother tongue, 16.1 percent were in professional and managerial jobs (two-thirds of whom were professionals), and many were in clerical jobs (20.3 percent). Sales employment was important (31.5 percent), but the blue collar jobs (service, craft, operative, laborer, and agriculture jobs) became less common (32.2 percent compared to 60.5 percent for the Jewish immigrant men). Among the native-born white men in 1910, 9.9 percent were professionals and managers, with only 16.3 percent in clerical and sales jobs, nearly half in the non-farm blue collar jobs (44.8 percent) and over a quarter in agriculture (28.7 percent).

Thus, in 1910 the East European Jewish men had occupational distributions very different from those of the primarily German Jews in 1860 or in 1890 (mainly sales and clerical). They were more urban and higher skilled than non-Jewish men in 1910, whether native or foreign-born. And among the Jews, those born in the US compared to those born in Europe were more likely to be in white collar jobs that in general would have required a command of English.

This tendency toward white collar and professional employment is seen vividly in the 1940 Census data (this volume, Chap. 6). Among the men born in the US who reported a Yiddish mother tongue, 14.9 percent were in professional and technical occupations, with 22.2 percent as managers. While clerical (14.6 percent) and sales (20.3 percent) jobs were still important, the blue collar jobs were clearly on the wane (27.3 percent). Among native-born white men, however, only 6.3 percent were professionals, 10.7 percent managers, 13.7 percent in sales and clerical jobs, and fully 69.1 percent were still in blue collar jobs, including agriculture. Thus, by the eve of US entry into World War II, the US-born children of Yiddish-speaking immigrants had achieved high rates of employment in professional occupations and were well on the road to abandoning the blue-collar jobs held by their immigrant parents and grandparents.

Occupations of Jewish Men: Post World War II¹⁷

(a) Identifying Jews

Identifying Jews in census data becomes more difficult in the Censuses after World War II. Yiddish falls out of use, even among Jewish immigrants, and the question on parental birthplace is last asked in 1970. An increasing proportion of Jews are third- and higher-generation Americans. For the ancestry question introduced in the 1980 Census, any response that indicates a person's religion is masked.¹⁸ Unlike the

¹⁷The data on occupational attainment are drawn from this volume, Chaps. 6 and 7.

¹⁸In the Census microdata file, all responses to the ancestry question identifying a religion (e.g.,

Public Use Microdata Files (PUMS files) created from the 1860 Census manuscript records that included the respondent's given name and surname; post-WWII microdata Census files have not included surnames because of a 72 year requirement of confidentiality. Still, a combination of decennial Census data, and other data, can be used to track Jewish/non-Jewish occupational patterns. For example, the 1990 and 2000/01 National Jewish Population Surveys (NJPS) can be used to identify Jewish occupational attainments.¹⁹

The Current Population Survey (CPS) has been conducted by the Census Bureau for the Bureau of Labor Statistics every month since 1947. The aim of the CPS is to provide timely data on labor market developments, particularly on employment and unemployment. In March 1957 the CPS for the first and the only time included a direct question on religion. The tables created by the Census Bureau from this survey permit a direct comparison of the occupational attainment of Jews and other white men (U.S. Bureau of Census, 1958 and no date, and this volume, Chap. 6).

(b) Occupational Attainment

The professionalization of the adult male Jewish labor force continued in the post-WWII period, reaching 20.3 percent in 1957. Many were still in managerial jobs (35.1 percent); sales was still an important occupation (14.1 percent), while clerical jobs (8.0 percent), craft employment (18.9 percent), and blue collar employment (12.3 percent) all declined, and agricultural employment remained negligible.

Among other white men in 1957, professional employment increased (to 10.3 percent) but not by as much as among Jews. Many fewer were in managerial jobs (13.6 percent) than among Jews. Similar proportions were in clerical jobs (7.1 percent), but a much smaller proportion were in sales (5.6 percent), while nearly two-thirds (63.4 percent) of non-Jewish white men were in blue collar jobs, including agriculture.

While non-Jewish white men experienced an increase in their occupational status from 1940 to 1957, Jews experienced a much sharper increase. Indeed, by 1957 one-in-five Jewish men were in a professional occupation, compared to only one-in-ten non-Jewish white men. Both patterns, improvements for non-Jewish men and greater gains for Jewish men, continued throughout the rest of the twentieth century.

The data on occupational attainment among Jewish men in the 2000/01 National Jewish Population Survey can be compared with that of white men in the 2000 Census of Population. Among Jews, over one half (53 percent) of the men were in professional occupations, with managerial jobs playing a much smaller role (14.8 percent) than in the past as Jews left managing small businesses. Sales remained important (18.5 percent), but clerical work declined (3.1 percent), while blue collar jobs (including service work) became even rarer among Jews (10.6 percent). Among all white men in 2000, professional employment increased, but to only 19.7 percent.

Jewish, Catholic, Baptist, Mormon, etc.) are given the same code. Thus, individual religions cannot be distinguished.

¹⁹ Unfortunately, there has been no National Jewish Population Survey conducted since 2000/01.

Managerial jobs held steady (15.1 percent). Others were employed in sales (10.4 percent) and clerical jobs (6.0 percent). In spite of the declines in manufacturing and farm employment in the US economy, nearly half of white men in the year 2000 were still employed in blue collar or agricultural jobs (48.6 percent).

Thus in the last four decades of the twentieth century non-Jewish white men experienced improvements in their occupational status, but Jewish men both started at a higher level and experienced steeper improvements.

(c) Doctors, Lawyers, and Professors²⁰

Given the importance of professional occupations among Jews, it is useful to examine the components. In 1940, among second-generation Yiddish mother tongue men, 14.9 percent were professionals, but of these 2.9 percentage points were in medicine (e.g., doctors and dentists), 3.5 percentage points in law (lawyers and judges), negligible numbers were college and university teachers, and 8.5 percentage points were in other professional occupations. This was a more intense concentration in independent professional practice, in particular medicine and law, than among non-Jewish men. Among male native-born non-Jews, of the 6.3 percent professionals, 0.8 percentage points were in medicine, 0.5 percentage points in law, 0.2 percentage points in college and university teaching, and 4.8 percentage points in other professions.

The General Social Survey (GSS) conducted nearly annually since 1972 by the National Opinion Research Center (NORC) includes a question on religion (Chiswick 1995). While each annual survey has too few Jews for statistically meaningful analyses, by aggregating the data across years a sufficiently large sample of Jews can be developed. Using data from the NORC General Social Survey (1974–1986), 43 percent of Jewish men were professionals, with disproportionate numbers in medicine (8.3 percentage points) and law (5.6 percentage points), a peak of 4.9 percentage points as college and university teachers, while 24.2 percentage points (56 percent of the professionals) were in other professional occupations.

By the 2000/01 National Jewish Population Survey (NJPS) patterns has changed even further. While just over half (53 percent) of Jewish men were professionals, the share in medicine and law had declined (4.8 percentage points in medicine, 5.3 percentage points in law), college and university teaching had declined (1.9 percentage points), and the share in other professions increased (41.0 percentage points). In contrast, among non-Jewish white men in 2000, while 19.7 percent were professionals, there were smaller proportions in medicine, law, and college and university teaching (0.9, 1.1, and 0.9 percentage points, respectively), while most were in other professions (16.8 percentage points).

²⁰ The data on occupational categories among professionals are drawn from this volume, Chaps. 6 and 7.

(d) Discrimination and Professional Employment

Prior to World War II professional opportunities for American Jews were limited (Dinnerstein 1994, Ritterband and Wechsler 1994, Alchian and Kessel 1962, Sarna 2004, Chap. 6, and this volume, Chap. 9). Discrimination against Jews in professional occupations was common in most industries, but Jews sought niches in which they could secure professional careers, including becoming self-employed professionals. The problem was compounded by discrimination against Jews in access to the schooling needed to acquire professional credentials. While many young Jews went abroad to study medicine, this was not feasible for law because legal systems are country-specific. Because of discriminatory barriers, Jewish hospitals and Jewish law firms were established in part to provide employment opportunities. But elsewhere, including professional employment in banking, insurance, finance, colleges and universities, durable goods industries, and corporate offices, the opportunities for Jews were limited.

With the end of World War II there was a dramatic, yet gradual change in attitudes toward anti-Semitic educational and employment practices, which had profound implications. One of the first sectors in which the barriers were relaxed was in higher education, in terms of both the admission of students and accepting Jews on the faculty. Jews, ever responsive to expanded opportunities, flocked into higher education. With expanded opportunities for employment in college and university teaching and the opening more widely of PhD programs, a greater number of Jews sought the PhD, the *de facto* “union card” for a position in higher education (this volume, Chap. 9). Indeed, PhD graduates who had distinctive Jewish surnames increased in the 1960’s and early 1970’s not only in absolute numbers, but also as a proportion of all PhD’s awarded, but thereafter the absolute and relative number declined. So too did the relative number of Jewish men entering medicine and law. Yet, the total number and share of Jewish men in professional occupations increased. As discrimination declined in other sectors of the economy in the last few decades of the twentieth century, Jews entered these other high-level professional occupations in larger numbers, thereby reducing their relative numbers in medicine, law and college and university teaching.

Occupations of Women²¹

The study of the occupational attainments of women in the early twentieth century is limited because so few married women worked in the labor market, and many women who did work for pay were young and usually not yet married.²² The choice

²¹ The data on the occupational attainment of women are drawn from this volume, Chap. 7.

²² Adult Jewish women who were married with children at home had a lower labor supply than otherwise similar non-Jewish women throughout much of the twentieth century. For the early twentieth century, see Glenn 1990, see also, this volume, Chap. 11.

of occupation of those young women who did work would have been influenced by their anticipating leaving the labor force. However, although Jewish women were less likely to work when their children were young, they were more likely to work before children were born, work part-time when their children were school age, or work full-time when they completed school (B. Chiswick 1997a, and this volume, Chap. 11). Jewish women appear to be at home making greater investments in the human capital of their young sons and daughters than non-Jewish women. By the end of the twentieth century, however, women's labor force participation, even that of married women, had reached high levels.

The high occupational status of contemporary American Jews is not limited to men, as Jewish women also experienced impressive occupational achievements. Using the data from the 2000/01 NJPS and the 2000 Census, information can be obtained on the occupational attainment of employed women (this volume, Chap. 7). Among Jewish women in 2000, 51.4 percent were in professional jobs, and 15.9 percent were in managerial jobs. Sales occupations were employing 12.9 percent and clerical jobs 12.1 percent, while the remaining 7.4 percent were in blue collar (including service) jobs. Among non-Jewish white women, 28.5 percent were professionals and 11.0 percent managers, 11.1 percent in sales, but a quarter (25.1 percent) were in clerical jobs. The blue collar (including service) sector employed nearly a quarter of non-Jewish white women (24.4 percent).

Among Jews with a job, the gender difference in occupations is quite small, especially if sales and clerical jobs are combined into one category, as men are more likely to be in sales and women in clerical positions (Hartman and Hartman 1996 and 2009). The gender differences are more striking among non-Jews, with especially high proportions of white women compared to white men in professional (including public school teaching) and clerical jobs. Yet the differences by religion are greater than the differences by gender. In particular, by the year 2000, half of employed Jewish men and half of employed Jewish women were working in professional occupations!

There is a tendency toward "positive assortative mating" in marriage. That is, men and women tend to marry those with similar characteristics, including race, religion, education, and occupational status, among other characteristics. This raises the question as to the extent to which high occupational status Jewish men and women marry each other. Using data on employed married couples from the 2000/01 National Jewish Population Survey in which both partners are Jewish by religion, in 51 percent of these couples both spouses are in professional or managerial occupations (C. Chiswick 2007). The proportion is 50 percent among employed couples in which both are Jewish by religion, ethnicity, or background. The proportion declines to 46 percent among couples in which one spouse is Jewish by religion, ethnicity, or background and the other spouse is of any other religion. This latter decline arises from the lower occupational status of the non-Jewish partner among inter-married couples. Thus, in about half of all married households in which at least one spouse is Jewish both the husband and the wife have jobs in high level occupations.

Self Employment

Self-employment is another characteristic of the economic position of a population, although self-employment can range from being a self-employed (own-account) peddler, to a self-employed professional, to owning a large retail or industrial establishment. The earliest systematic data on self-employment comes from the 1910 Census of Population and extends to the most recent data (US Bureau of the Census (1989), and this volume, Chap. 6 and 7).²³

In 1910, among the foreign-born Yiddish mother tongue men, 38.4 percent were self-employed, even though there were few farmers among them. Self-employment was much lower (16.1 percent) among the second-generation Yiddish mother tongue men in 1910. Among non-Jewish men, self-employment was lower among the foreign born (22.3 percent), and much higher among the native-born (35.5 percent), many of whom were farmers.

Self-employment among Jewish men increased by 1940 to 41.4 percent for immigrants and 27.0 percent among the second generation. Among the non-Jewish men there was no change among the immigrants (21.2 percent), but a decline among the native born (to 27.3 percent), reflecting the decline in the agriculture sector, especially the family farm.

According to the 1957 Current Population Survey data, with the direct Jewish identifier, nearly one-third of Jewish men were self-employed (31.9 percent), in contrast to half that ratio among the non-Jewish men (15.8 percent). The proportions were roughly the same in the 1970 Census data for white second-generation Americans, 31.9 percent for Jews (identifying them by their mother tongue) and 14.1 percent for non-Jews.

Self-employment has since declined substantially for Jewish men, falling to 26.8 percent and 23.2 percent in the 1990 NJPS and 2000/01 NJPS, respectively. This is still much higher than the rate of self-employment among non-Jewish white men, which remained steady in recent decades (14.1 percent in 1990, 14.0 percent in 2000).

Women are less likely to be reported as self-employed than men. Even among women, however, self-employment is greater among Jews, but the Jewish female self-employment rate declined from 14.0 percent in 1990 to 11.3 percent in 2000. In contrast, among non-Jewish white women it held steady at 8.6 percent in both years.

Although very few Jews in the US were in farming, Jews had very high self-employment rates that initially increased in the early twentieth century as factory workers, craftsmen, and laborers became owners of small retail and industrial businesses, and then declined sharply in the second half of the twentieth century. The decline was associated with Jews leaving the ownership of small businesses and entering managerial and professional positions in larger firms as salaried workers – the corporate sector, higher education, and government. That Jews still have a higher

²³The published material from the 1890 Billings Report did not include information on self-employment (Billings 1890).

propensity for self-employment is, in part, a shift from operating family owned retail and light manufacturing firms to self-employed professional activities. The very high self-employment rate among native-born white non-Jewish men in the early twentieth century and the very large decline over the course of the twentieth century is largely due to the change in the nature and scope of the agricultural sector.²⁴

Earnings of American Men

Even more scarce than data that can be used for comparing Jewish and non-Jewish occupational status, is comparative data on earnings. Yet over the course of the twentieth century there are a few data sets that permit this comparison.

A question arises as to whether the rapid improvement in the occupational status of turn-of-the-twentieth century East European and Russian Jewish immigrants reflected a preference for managerial and sales occupations in small businesses over wage and salary employment in other occupations that might have provided higher earnings. Data from the Dillingham Immigration Commission Report published in 1911 can shed light on this issue (US Immigration Commission 1911, this volume, Chap. 5).²⁵

The Dillingham Commission conducted a survey in 1909 of production workers in selected mining and manufacturing industries, with an oversampling of industries with a heavy concentration of immigrants from Southern and Eastern Europe (this volume, Chap. 5).²⁶ Jewish immigrant men had, on average, weekly wages (\$13.30) that were 15 percent higher than other Southern and Eastern European immigrants (\$11.54), but they were lower by only 2 percent than those from Northwestern Europe and Canada (\$13.56), and lower by only 5 percent than the native-born (\$13.98). Controlling statistically for several determinants of earnings (e.g., literacy, marital status, age, duration in the US, and region of US residence), the Jewish immigrant men earned about 15 percent more than all other male immigrants,

²⁴In the 1890 Census, 46.2 percent of native-born non-Jewish white men worked in agriculture as farmers, farm owners and farm laborers. By 1990 among white men this had fallen to 3.6 percent (this volume, Chap. 6), and had declined further since then.

²⁵William P. Dillingham was an anti-immigrant Senator from Vermont who chaired the Commission. Volume 1 of the 41 volume report was the policy analysis which took a very dim view of Southern and East European immigrants. The Commission's report was instrumental in the enactment of legislation that resulted in the "national origins" quota system (legislation in 1921 and 1924) that drastically restricted immigration from Southern and Eastern Europe, including Russia, for four decades, until the 1965 Immigration Amendments. Volumes 2–41 were the scientific analyses of various characteristics of immigrants, including analyses by occupation, industry, and country of origin. They seem to have been well executed without the bias against immigrants that dominated the policy analysis in Volume 1.

²⁶The Dillingham Commission data differentiated between Russian origin and other Jews. There was no difference in earnings between the two groups.

including more than both other Southern and Eastern European immigrants (13 percent more) and Northwest European immigrants (18 percent more).

At arrival, Jewish men earned less than the native-born white men, but because their earnings increased sharply with duration in the United States they caught up with the native born at about 4.5 years duration in the US, beyond which the Jews had higher earnings than their native-born non-Jewish counterparts. Earnings increased more steeply with duration in the US among the Jewish immigrants than among other immigrants. This implies either greater investments in US-specific job training, or a higher economic return from such training, or both.

The 1940 Census was the first Census to include a question on earnings or income (US Bureau of the Census 1989). It asked for wage, salary, and commission income of those with earnings who were not self-employed. Jews could be identified by mother tongue. The average annual earnings among Jewish men was \$1574 and among white non-Jewish men, \$1321 (19.2 percent higher earnings). Other variables the same, however, male Jewish wage and salary workers earned 8.8 percent more than non-Jewish white men. Thus, half of the gross differential is attributable to other variables (e.g., schooling, urban, northern residence, etc.) and about half remained (this volume, Chap. 6).

The tables constructed from the March 1957 Current Population Survey, which included a question on self-reported religion, included data on median annual incomes among men (US Bureau of the Census 1958 and *n.d.*). Jews earned \$4900, considerably more than the \$3728 of white Protestant men (by 31 percent) and the \$3954 of Roman Catholic men (by 24 percent). The differences shrink when the data were limited to employed men living in urban areas and standardized for major occupational group. Then Jews earned 4.8 percent and 5.9 percent higher median income than white Protestant and Roman Catholic men, respectively.²⁷

Using the data from the NORC General Social Survey, 1974–1986, where religion is self-reported, Jews are found to have about 38 percent higher earnings (\$27,300 for Jewish men compared to \$19,800 for other men) (Chiswick 1995). When statistical controls are introduced for several variables (including schooling level, urban residence, and marital status), the Jewish earnings advantage declines to 16 percent, with no obvious trend in the differential over the period.

Using the “mother tongue” technique for Yiddish, Hebrew, or Ladino among second-generation Americans in the 1970 Census, a subset of Jews can be distinguished from other second-generation white Americans (Chiswick 1983). Other measured variables the same, Jewish men had a 16 percent earnings advantage over comparable non-Jewish white men with parents born in the British Isles (the

²⁷ For two reasons, the Jewish/non-Jewish earnings differential is smaller in the 1957 Current Population Survey than in the other data on earnings considered elsewhere in this section. When the Census Bureau standardized the data for major occupation group, it essentially held constant another important measure of labor market outcomes, namely, occupational attainment. This narrowed the Jewish/non-Jewish earnings differential. Because of the positive skewness in the distribution of earnings, it is likely that the relative difference in medians reported for the March 1957 CPS is smaller than the relative difference in means reported elsewhere.

benchmark).²⁸ All of the other parental birthplaces have earnings not significantly different from or significantly lower than those with parents from the British Isles, with one exception. Those of Russian parentage who did not report a Jewish language as their mother tongue had earnings 6 percent higher than those from the British Isles. This latter group may include many second-generation American Jews who are not identified as having a Jewish mother tongue.

The regression analysis using second-generation white Americans in the 1970 Census also revealed two other characteristics of the Jews (defined by mother tongue) under study (Chiswick 1983). One is the larger payoff to education as measured by the coefficient on years of schooling, even when occupational status is held constant. This suggests that Jews are more effective than others in converting schooling into earnings, providing a greater incentive to make these investments. The other is the larger elasticity of annual earnings with respect to weeks worked, suggesting a greater responsiveness of labor market behavior (employment) to economic incentives (wages).

The “New” Russian Jewish Immigrants

The twentieth century began and ended with the immigration to the US of Jews from the Russian Empire and from its later equivalent, the Former Soviet Union (FSU). The term “Russian Jews” in both periods was applied to those who came from Russia and the territories it occupied, including the Ukraine, the Baltic States, Central Asia and the Caucasus. While it is not possible to identify American Jews as such in recent Censuses, it is possible to analyze recent Russian Jewish immigrants, as has been done using the 1980–2000 Censuses (Chiswick 1993, 1997b; this volume, Chap. 8).

During the late 1970’s and early 1980’s, and again during the late 1980’s through the early 1990’s, there was a substantial migration of refugees to the United States from the Former Soviet Union (FSU), although in the latter period there was a much larger flow from the FSU to Israel. Unlike the Russian Jewish immigrants from 1881 to 1924, who were Yiddish-speaking workers in sales, craft, and operative jobs before migrating, the newer influx spoke Russian and tended to be highly educated individuals who had worked in professional occupations.

For the purpose of analyzing the new influx of Russian Jews, the 2000 Census data was limited to immigrants who came to the United States since 1965, with Jews identified as those born in the former Soviet Union who were not of Armenian

²⁸ The other variables include schooling, labor market experience, marital status, urban residence, residence in a southern state and parent’s country of birth (Chiswick 1983). When major occupational categories are added to the earnings equation, Jewish men earned 10.2 percent more than second-generation white non-Jews.

ancestry and did not report that the language that they spoke at home was Armenian or Ukrainian.²⁹

Other variables being the same, the Russian Jewish immigrants in the 2000 Census had earnings that differed from those of other European immigrants, but the earnings differences varied sharply by period of arrival and level of education (this volume, Chap. 8). Among immigrants in general, earnings increased with duration in the US, but this gradient was much steeper for the Russian Jews. While the earnings of Russian Jews who arrived in the US between 1965 and 1990 did not differ significantly from other European immigrants, the earnings of Russian Jews were lower among those who arrived more recently, and therefore had been in the US for a shorter period of time.

Analyses for the 1980 and 1990 Censuses also show recent Soviet Jewish arrivals having lower earnings than other European immigrants, with the differences in earnings diminishing and then disappearing with a longer duration. Thus, while recent immigrants from the Former Soviet Union initially had low earnings in the 1980 and 1990 Censuses, after being in the US about 10 years they appear to have attained earnings parity with other European immigrants.

This pattern would be consistent with the refugee nature of the Russian Jews. They were fleeing religious/ethnic discrimination and for most the ability to leave and the timing was generally unexpected, and few had planned in advance for the move. The greater steepness of the increase in earnings with duration in the US is consistent with greater investments to increase the transferability of their pre-migration skills, including language skills, or higher rates of return on post-immigration investments in skill, or both.

It is noteworthy that in spite of generally lower transferability to the US labor market of the skills of refugees than of economic migrants, Russian Jews in 2000 received a larger payoff from years of schooling than did other immigrant men (7 percent higher earnings for each extra year of school, which is greater than the 4.5 percent for other immigrants). As a result of the greater return from schooling, at the mean level of schooling among Soviet Jews (14.8 years), those in the US for 10 or more years had achieved earnings parity in 2000 with other European immigrants.

Thus, in spite of their refugee experience that put them at a substantial earnings disadvantage at arrival, compared with other European immigrants the Russian Jews experienced much more rapid improvements in their labor market earnings and greater returns from their schooling. By 2000, those who arrived in the US in 1990 or earlier with the mean level of schooling for Russian Jews had already

²⁹ Among the adult male immigrants in the US in 2000 who immigrated since 1965 from the Former Soviet Union, 41 percent reported their ancestry as Russian, 10 percent gave an ancestry response indicating a religion (specific religion masked by the Census Bureau), 11 percent reported Armenian, and 38 percent gave a variety of other responses. Of the languages spoken at home in the US, 4 percent reported only English, 72 percent Russian, 9 percent Armenian, 7 percent Ukrainian, and 8 percent other languages, of whom only 0.2 percentage points, primarily older men, reported Yiddish (this volume, Chap. 8).

attained earnings parity with other, primarily economic, European immigrants. It was the most recent arrivals and those with little schooling who were at the greatest earnings disadvantage.

Wealth

Occupational attainment and earnings reflect the human resources of a person – including schooling, job-related skills, decision making ability, and other personal characteristics, mitigated by the discrimination experienced. Yet, individual and household well-being is also reflected by the non-human assets that they own, referred to here as their wealth. Data on the wealth of American households are even more scarce than data on occupation, earnings, or self-employment, and do not go back far in time. Data on wealth that includes a method for identifying Jews, with a sufficiently large sample for statistical purposes, is even more scarce. Moreover, wealth data are plagued by far more measurement issues than are data on occupation or earnings. The reporting of wealth is subject to much error: few know the true market value of their owner-occupied house, and even fewer know the asset value of their pension plans. Moreover, family or household composition affects wealth status.

It would be expected that contemporary American Jews would have a high level of financial wealth. The high occupational status and the high earnings would provide the resources for wealth accumulation. The high propensity for non-farm self-employment would also be conducive to wealth accumulation. Furthermore, the low fertility rate implies that the same parental wealth passed on to the next generation would mean a greater inheritance per child, facilitating the inter-generational transmission of wealth among Jews. If, as suggested above, Jews appear to be more responsive to economic opportunities they probably would also be more successful in wealth accumulation.

Keister (2005, Chap. 7) used the data from the National Longitudinal Survey of Youth (1979 cohort) to study the wealth 20 years later (2000) of respondents by the religion in which they were raised. While she found that the median net worth for all families in these data was \$58,000 in 2000, for Jews it was \$221,000. Among the religious groups identified, the next highest wealth holders were the Episcopalians with a median wealth of \$120,000. Among the groups studied, Jews had the smallest proportion of those with zero or negative net worth. Jews were more likely than any of the other religion groups identified to: own their own home, own stocks or bonds, have a checking or savings account, and own business assets.

Other determinants of wealth the same, including level of schooling, those who were raised Jewish had a higher level of wealth, and were more likely to own stocks (Keister 2005, Chap. 7). They were more likely to have a trust account and to have inherited assets, two measures of inter-generational wealth transfers.

In contrast to the simple pattern, when other measured variables are the same, such as schooling, Jews were less likely to own their own home. This may arise from the study not controlling statistically for urban residence, particularly

residence in New York City. Home ownership is lower in urban areas in general and in New York City in particular, and Jews are a highly urbanized population with a high concentration in New York City. It may also reflect a substitution of investments in financial assets over investments in owner-occupied dwellings among Jews compared to non-Jews of the same level of schooling.

The high level of wealth among Jews, perhaps in part due to a greater responsiveness to economic incentives, helps finance the high level of education in the next generation, and hence the high occupational attainment and earnings of their children, as well as their children's financial assets. Thus there is a greater intergenerational transmission of human and non-human assets among Jews compared to those who are not Jewish. The data, therefore, do not suggest that the high level of schooling and occupational attainment of Jews (their human capital) came at the expense of a lower attainment of non-human wealth – physical and financial capital.

Summary and Conclusion

The occupational patterns of American Jews were influenced by the occupations that they had prior to migration to the US and the employment opportunities that they experienced once settled in this country. The Jews of Colonial America concentrated on the east coast seaport cities and specialized in trade (local, interior, coastal, and international) and finance. The mid-nineteenth century German Jewish immigrants spread across the country, specializing in sales and managerial jobs in retail trade, often starting as peddlers. Some progressed to owning and managing large and prominent department stores.

The late nineteenth and early twentieth century East European and Russian Jewish immigrants concentrated in New York City and other emerging industrial centers. They started in craft, operative, and laborer jobs, but if not they then their children advanced to higher level occupations. By mid-twentieth century many were employed in managerial and professional occupations. At the turn of the twenty-first century half of Jewish men and half of employed Jewish women were in professional jobs, compared to only one-in-five among non-Jewish white men and women.

Although few Jews were farmers, throughout their experience in the United States Jews have had a high rate of self-employment. However, the nature of the self-employment did change. Among the mid-nineteenth century German Jews self-employment in the retail sector predominated. Among the East European and Russian Jews in the early twentieth century light manufacturing (e.g. garment industries) and retail trade were the primary industrial sectors for the self-employed. Later self-employment among professionals came to be an important activity.

Although limited, some data over the twentieth century permit comparing the earnings of Jews with that of others. These analyses find substantially higher earnings among Jewish men than other white men overall, and even after controlling for the major determinants of earnings, including years of schooling. The differential

appears to be at least 16 percent, *ceteris paribus*. When another measure of labor market outcomes, major occupational group, is held constant the earnings advantage of Jewish men declines to about 8–10 percent. Yet, differentials of these magnitudes are the economic equivalent of about two extra years (or when major occupation group is held constant, one extra year) of schooling. This is in addition to the higher educational attainment of Jewish men.

The analyses of earnings suggest that Jews receive a higher economic return from their years of schooling. This may contribute to their obtaining higher levels of schooling. The earnings data also suggest that Jews have a more elastic labor supply curve, that is, that higher wages have a greater impact on increasing employment among Jews. This suggests a greater sensitivity to economic opportunities. Moreover, Jewish immigrants appear to have a steeper increase in earnings with duration in the US than do other immigrants. Taken together these patterns in earnings suggest that Jews make greater investments in their human capital relevant for the labor market, that they receive greater returns from human capital investments, and that they appear to be more responsive to economic incentives than are others.

Data on wealth are much more limited, and wealth is measured with greater error than is occupation or earnings. Data for adults in the year 2000 suggests that those raised Jewish have a much higher level of wealth (measured by financial assets, business assets, and the value of real estate or housing assets) than those raised in another religion. Wealth among Jews is even greater than among the next wealthiest religious group, the Episcopalians. This holds true even when other measured variables are held constant. Thus, the data suggest a higher rate of accumulation of assets, a higher level of wealth, and a greater inter-generational transmission of wealth among Jews. These patterns may be reflecting a greater ability to discern and a greater responsiveness to opportunities for wealth accumulation, a greater willingness to take economic risks, and a higher savings rate.

There are several lessons to be drawn from the economic experience of American Jewry. One is that Jews sought out niches in the labor market in which they would be subject to less discrimination. Some of these niches were in new occupations, such as in entertainment, including the emerging movie industry in the early decades of the twentieth century. When new economically rewarding sectors opened, Jews entered them.

A second was the application of entrepreneurial and decision-making skills. From the Colonial Jewish merchants and financiers, to the German Jewish shop owners, to the present managers and professionals, Jews demonstrated a capacity for successful entrepreneurial activity. It may be debatable whether the Jews “made” the garment industry or the movie industry or whether these industries “made” the Jews, but there is no debate that the Jews identified and entered emerging economic sectors.

A third is that Jews placed high value on learning the skills necessary for advancement given the time and place. In twentieth century America that meant schooling, and Jews placed an emphasis on achieving high levels of formal education. For some this meant battling discrimination directly, for some it meant finding ways to avoid discrimination in the US (e.g., studying medicine abroad), for some it meant

masking or even denying their Jewish religion, heritage, or identity, but for most it meant taking advantage of existing educational and employment opportunities in the United States.

Thus, it appears that American Jews have not achieved a higher occupational status through a sacrifice of earnings, but rather they have achieved both high earnings and high occupational status simultaneously. Moreover, their greater labor market achievements do not appear to have retarded their wealth accumulation, but rather appear to have advanced it. Throughout their over 350 year presence in the United States, American Jews have demonstrated extraordinary economic achievements.

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Chapter 17

Epilogue: Why the Jews Flourished in America



Barry R. Chiswick and Carmel U. Chiswick

The previous chapters document various aspects of the high level of economic success of American Jews compared to other Americans, from Colonial times to the present. In the earlier period, the analyses relied on qualitative data, but since 1860 they could use quantitative data and statistical analyses. Rather than focusing on the Jewish elite or on the long-term (chronic) Jewish poor, they have examined evidence for the American Jewish community as a whole. They demonstrate that a high level of economic success, whether measured by educational attainment, occupational status, self-employment, or income (or earnings), has been a long-term, persistent feature of the American Jewish experience.¹

This chapter discusses a set of hypotheses, or alternative stories, that suggest some possible causes for this remarkable achievement. Each of these explanations has some degree of plausibility, but each also has its pitfalls or limitations. None by itself provides a full or complete explanation, but each may offer some insights into a complex phenomenon. It may also be that there is no one compelling or over-arching story underlying the economic success of American Jewry, but rather a “perfect storm” of favorable circumstances. In particular, while economic freedom was a necessary condition, it may not have been sufficient. And while the cultural/religious emphasis on learning and analytical (decision making) skills was a necessary condition, it too, by itself, would not have been sufficient. Yet, the two together have provided both the

¹ While there has not been as comprehensive an analysis for other Diaspora countries, the limited studies suggest comparable findings, although not as striking as for the United States. For example, see Dinar (2015); Elazar and Medding (1983); O’Grada (2006); Pendakur and Pendakur (2011); Prais and Schmool (1975); Syrquin (1985); and Tomes (1983).

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necessary and sufficient conditions to allow for the extraordinary success of Jews in the United States.

The chapter closes with a discussion of the expected future characteristics and relative economic status of American Jewry.

Free Markets and Jewish Achievements

In his essay, "Capitalism and the Jews," Milton Friedman (1985) hypothesizes that "Jews have flourished most in the sectors that have the freest entry and are in that sense most competitive." These sectors may be different countries, time periods, or industries within a country. He posits that government regulation facilitates the economic interests of "favored" groups, to the disadvantage of others, whereas free markets are highly competitive and reward the most innovative and productive. Hence, groups that are not favored do better economically in highly competitive free markets.

Friedman begins his study by contrasting Jewish success in the highly competitive retail trades with the small representation of Jews in the highly regulated banking sector. "Or compare their minor role in large industry with their prominence in the professions... Though there are barriers to entry in the professions too, once past the initial barriers, there is a large measure of free competition." He then contrasts the professions: "...there was significant restriction of entry in medicine, relatively little in law. And Jews were proportionately much more numerous in law than in medicine." Further, he wrote: "the movie industry in the U.S. was a new industry and for that reason open to all. Jews became a major factor and this carried over to radio and television when they came on the scene." Another example, one that he does not mention, is manufacturing. Relatively few Jews were engaged in founding and managing the highly concentrated heavy industry sectors (e.g., iron and steel, automobile, oil) in contrast to the highly competitive, easy entry garment industry and other light manufacturing.

Free markets may help explain the relative economic success of the United States compared to other countries, and – on the principle that a rising tide lifts all boats – the economic success of the many immigrant/ethnic/minority groups that comprise its population. Yet this by itself cannot explain the high achievement of American Jews relative to other groups in this country. For free markets to be an important causal factor in their relative economic success, one also needs to demonstrate that Jews, more than others, were able to identify more quickly and engage more fully in the productive competitive niches in the economy. Thus, while free markets may have been a necessary condition, they are not a sufficient condition for explaining American Jewish success.

Diaspora Hypothesis

Over the course of the last 1000 years, the Jews in Europe, from Italy and Spain to England and Russia, had experienced periodic waves of violence, expropriations, and expulsions that varied by country and century. They could not count on the

protection of the government as the government was all too often the perpetrator. This resulted in a sense of insecurity as one never knew when the next pogrom or expulsion would occur. This is the logic behind the “Diaspora Motive” or “Diaspora Hypothesis” for Jewish economic success (this volume, Chap. 10).

The Diaspora Hypothesis has clear implications for investing in human capital rather than fixed assets, such as land, in troubled times. Skills such as literacy, numeracy, and crafts (merchant or artisan skills) are embodied in the person and are more difficult to expropriate than land or other non-portable assets.² Because they are embodied in the person, they travel with the person when migration (whether voluntary or compulsory) occurs. Even in peaceful times, a group subject to intermittent expropriations would have an “insurance motive” for investing in human capital that is inherently portable, and would prefer investing in skills that are transferable. After all, experience would have shown that the good, peaceful times would not last forever and might evaporate abruptly.

The Diaspora Hypothesis would therefore favor investments in transferable over non-transferable assets. It would favor the studying of medicine because the subject (the human body) is the same across areas, in contrast to the study of law where the subject (the legal system) is country-specific. It would also favor investments in skills not subject to guild or occupational licensing or other barriers to entry. In terms of physical assets, it would favor investments in portable, transferable assets, like precious stones, over investments in land or heavy, immovable equipment.

One implication of this hypothesis is that Jews would favor investments in human capital even to the point where their rate of return dips below the return to alternative, non-human investments. That is, they would “overinvest” in skills. If this were the case, their higher level of education should be associated with a lower measured rate of return. The statistical analyses in previous chapters do show higher levels of educational investment among American Jews than other demographic groups. However, they also show that the positive effect on earnings of schooling, job training, and, among immigrants, labor market experience in the US are greater for Jews than for non-Jews. This implies that Jews experience a higher rate of return than others from these investments. Indeed, the higher rate of return might be an important explanation for why Jews make such high investments in human capital.

Moreover, if the Diaspora Hypothesis suggests Jews overinvest in human capital, it implies they underinvest in physical capital or financial assets. If this were the situation, American Jews would, as a result, have lower levels of financial wealth and business assets. Yet, as shown in the analysis of wealth (this volume, Chap. 16), the opposite seems to be the case – on average American Jews appear to have a significantly higher level of wealth (assets) and a higher rate of wealth accumulation than do others, even compared to other high wealth religious denominations.

² While numeracy and craft skills are highly transferable across areas or even countries, so too is literacy. It is much easier to learn the speaking and literacy skills of a new destination language if one is more fluent or more literate in the language of one’s origin. That is, literacy in one’s native language or “mother tongue” facilitates acquiring literacy in newly acquired languages.

Family Structure and Jewish Women

All parents invest time and money in their children, whether explicitly or implicitly. For a given resource budget, the more children they have the less they can invest in each child. Thus, there is a tradeoff between fertility — the “quantity” of children per woman — and expenditure of parental time and money resources to improve the “quality” of those children (this volume, Chaps. 11 and 12). This tradeoff is often cited as the reason urban fertility is lower than rural fertility since the cost of supporting an additional child is lower on farms than it is in cities. Even for groups facing the same costs, however, childrearing practices and parental goals are affected by the larger culture and their group specific culture. As a result, groups may respond differently to the same quantity-quality tradeoff. This can give rise to group differences in fertility and the human capital (skills) of their children. If the underlying conditions persist, the child quantity-quality model predicts that the divergence across groups in fertility and child investment decisions would be passed on from one generation to the next, and may even cause group differences to increase over time.

The study of female labor supply (this volume, Chap. 12) indicates that Jewish women in the US had a different labor force participation behavior than their non-Jewish counterparts. They tended to be more likely to work in the labor force before marriage and even after marriage when they are childless, but they are less likely to continue working once their first child is born. Jewish women tend to have a lower work participation rate when their children are very young because parental investments in a child’s human capital is a “time-intensive” activity. Once their children are school age, Jewish mothers are more likely to return to work, but are also more likely to work part-time or part-year. When their children are older, investment in their human capital is more “goods-intensive” (i.e., expensive in terms of money) and Jewish mothers have a greater propensity to return to full-time market work.

As a predominantly urban population, both in Europe and in the United States, Jews have had an incentive to have fewer children. Jewish parents also view investments in human capital, especially education and health, as high priority “quality” goals for which they are prepared to make substantial sacrifices in their own consumption. For these and other reasons, Jews tended in the past (and even currently) to invest more in the human capital of each of their children and hence to have relatively low fertility compared to their non-Jewish neighbors.

We know that mother’s time input into childrearing is important to promoting the educational and skill achievements of their children, and yet resources from work to help support the family are also important, especially when their children incur training or schooling expenses. Thus, it appears that Jewish mothers, more so than other mothers, allocate their work time and child care time over their lifecycle so as to optimize their investments in child quality, working less in the labor market when their children are time intensive, and working more when there are no children (i.e. before the first birth) or when their time investments in their children are less important. These incentives would have been strengthened by a tendency toward strong family ties and two-parent households.

If work patterns of Jewish women over the life cycle reflect “optimal” investments in child quality that raise their ability to benefit from schooling, Jewish children would experience higher rates of return from investments in human capital that induce them to make greater investments in schooling, as well as various job-related occupational skills. Although these opportunities were potentially available to other groups as well as Jews, the question remains: why were Jews more likely to favor a higher “quality” over a larger “quantity” of children? And why did this pattern start and persist over a long time? It would seem that cultural attitudes toward the roles of education and of women, both in the workplace and at home, may play an important role in this decision.

Allocative Efficiency and Jewish Culture³

As demonstrated in earlier chapters in this book, American Jews have shown a faster and deeper response to economic opportunities than have others. When the economy is static and relative prices are stable, everyone can gradually learn the optimal way of working or doing business. When it is dynamic those with the best decision-making skills (allocative efficiency) can earn greater economic benefits as they respond more quickly and appropriately to the changing economic incentives (Schultz 1975). Decision-making skills have a greater economic return when the economy is changing, whether because of technological change, economic development, or – in the case of immigrants – new economic conditions. Because international migration involves making many decisions for adjusting to the new country and economy, immigrants tend to be self-selected for people with high allocative efficiency (decision making skills), so they are more likely to be entrepreneurs (and hence to be self-employed) in existing and especially in new and expanding sectors of the economy. By extension, a culture that fosters decision-making skills and analytical reasoning, rather than rote learning, would be at a competitive advantage in acquiring new skills (including through schooling) and in the dynamic economy that has been a consistent feature of the United States.

Jews may have had better economic success in the very dynamic free-market environment of the United States if their allocative efficiency (skills for making good economic decisions) were greater than that of other groups. Talmud students learn the value of analyzing texts from various perspectives and disputing (debating) their possible interpretations, a process that enhances the development of decision-making skills. Although Jewish immigrants to America would generally not themselves have studied Talmud or been rabbinical students, the Jewish cultural environment from which they came was steeped in its values and methods of learning. The analytical skills derived from Jewish religious culture would have been

³ Schultz (1975) develops the concept of allocative efficiency (decision making skill) in contrast to worker efficiency, (performing assigned tasks) and discusses how education can enhance allocative efficiency.

complementary to the economic decision-making skills so useful in the dynamic economy of the United States.

Religion, Culture, and Education

When and how did the Jews become an urban and relatively educated population compared to their non-Jewish neighbors? Botticini and Eckstein (2012) argue, persuasively, that this can be traced back to the first millennium following the destruction of the Second Temple by the Romans in the year 79 C.E. At that time Jews, like most people, were predominantly farmers or herders in an economy and environment that changed little over time. They could learn from parents or neighbors the skills needed for their primary occupation.

Following the destruction of the Second Temple, which had been the center of Jewish religious practice, to preserve the now more decentralized religion, Jewish education involved learning to read and study the Torah. In a stable economic environment with few economic opportunities for Jews or for others, Jewish religious skills that were expensive to acquire had little payoff in the marketplace.⁴ Yet, the first lesson of Jewish religious education involved learning the *aleph-bet* (i.e., the Hebrew alphabet) whether or not literacy would have any economic value.

The religious emphasis on investment in human capital would also have demographic consequences. Jews for whom these investments were difficult or had little value may have avoided them, becoming marginal to the Jewish community or even leaving it to merge into the larger society, leaving the Jewish community smaller, more concentrated in high-end urban occupations, and more focused on religious as well as secular studies.

Botticini and Eckstein (2012) argue that this explains why the Jews, more so than others, left agriculture and were transformed into a predominantly urban and occupationally skilled population. Wherever the economy was more dynamic, there was a greater economic return to allocative efficiency. With a social premium among Jews on Talmudic religious studies and practice, there developed a culture that prized not only literacy but learning, discussing, and analyzing in general, and decision-making skills in particular.

In the world of medieval Christians who rarely made such investments, Jewish distinctiveness came to depend not only on religious differences but also on the human capital associated with literacy, commerce, and finance. Jews would experience a similar change later in Europe with the Enlightenment, the Industrial Revolution, and economic growth. As a literate urban population with a culture that encouraged learning and decision-making skills, they would have been at an economic advantage. The emphasis of Talmud on questioning and viewing issues from

⁴Nor was there much economic incentive to invest in the decision-making skills obtained from studying Talmud, which included discussions of everyday ethical issues as well as commentaries on Torah.

different perspectives would also complement the scientific method of investigation, easing the transition from religious studies to secular studies. With an intergenerational transmission of these cultural traits among Jews, a higher than average level of occupational and decision-making skills and urban residence could have persisted over time.

It seems that these cultural and economic characteristics did persist for centuries and through substantial changes in the world economy. They have also followed the Jewish population through many changes in its geographical center of gravity, from Judea to Babylon to North Africa to Spain and to the Rhineland and the Ottoman Empire. By the middle of the nineteenth century most of the world's Jews lived in Eastern Europe and Russia, the countries of origin for most Jewish immigrants to the United States in the late 19th and early twentieth century.⁵

These attitudes toward education for one's children would have influenced a wide range of Jewish practices, including fertility. On the "quantity-quality" spectrum, a religious requirement to educate one's children would have encouraged smaller families. Thus, the low Jewish fertility and larger investments in their children's education would have had a negative effect on Jewish population growth, but a positive effect on income or earnings per adult.

While this may have been a necessary condition for Jewish economic success, it would not have been sufficient in an anti-Semitic cultural or political environment, which would challenge Jewish achievement. Yet, the two necessary conditions combined, economic freedom and a culture that focuses on education that promotes decision-making skills, may have been sufficient to enable American Jews to achieve high levels of economic success.

Prospects for the Future

The Jewish and non-Jewish world of the early twenty-first century differs sharply from that of the twentieth century. At the time of this writing, early in the twenty-first century, most of the world's Jewish population lives in the United States and Israel. The future prospects for Diaspora Jewry (57 percent of World Jewry) depend heavily on developments in the United States, the home of about 70 percent of all Diaspora Jews. Three distinct features of American Jewry are a high level of educational attainment, slow population growth because of low fertility and immigration rates, and a growing rate of religious intermarriage. Each of these features has implications for the future.

⁵ Although Jews came to America from many countries, the wave that arrived during 1880–1920 from Russia and Eastern Europe was so large that it constituted the overwhelming majority of Jewish immigrants (and their descendants) throughout the twentieth century.

Education of American Jews

The high educational attainment and economic achievement of American Jews was an important characteristic in the twentieth century, and will probably continue well into the 21st. As college and higher education become more widespread in the general population, however, the quest for higher education among Jews becomes less of an identifying Jewish characteristic. An increasing level of educational attainment among non-Jews effectively undermines a distinction that has been important for the self-image of American Jews, especially those Jews with weak religious attachments.

As the educational attainment of non-Jewish Americans converges to that of Jews, the social boundaries separating them become blurred. Non-Jewish parents investing heavily in their children's human capital have an incentive to have smaller families and follow childrearing practices similar to that of Jews. People with similar educational backgrounds have much in common, an important condition for family formation and marital stability. As the general American population acquires the very traits that led to Jewish success in the twentieth century, American Jewry can no longer rely on these distinctions – distinctions that are essentially secular rather than religious – for internal cohesion.

Demographic Characteristics of American Jews

In the past, the American Jewish community was periodically augmented by large waves of Jewish immigrants, whether purely economic migrants or refugees, from diverse origins. This is not likely to occur again. With the American Jewish community comprising about 40 percent of world Jewry and 70 percent of Diaspora Jews, there are relatively fewer Jews elsewhere than in past centuries to seek refuge during difficult economic or political times in their countries of birth.⁶ Moreover, Diaspora Jews in distress since 1948 have had a welcoming open door in the State of Israel. As long as Israel remains an economically strong and militarily secure country, many, if not most, of other Diaspora Jews seeking refuge will choose that option regardless of U.S. immigration policy.

Fertility rates in the United States are below the 2.1 births per woman needed to maintain a stable population. If not for immigration (currently about one million per year), the US population would become stable and eventually start to decline. But the fertility of American Jews is even lower than that of the general population. The fertility rate differs across Jewish religiosity; it is highest (and above replacement)

⁶Most Diaspora Jews in 1880 lived outside the U.S. in economically backward, repressive, anti-Semitic countries. In contrast, Diaspora Jews outside the US in the early twenty-first century live primarily in stable, liberal democratic, advanced economies, such as Canada, France, the United Kingdom, Germany, and Australia. (DellaPergola 2016, p.285, Table 7.1 and p.294, Table 7.6)

among the Orthodox, especially the ultra-Orthodox, but below replacement among the other denominations and secular Jews. (The non-Orthodox low fertility rate is due to both a decline in the marriage rate among Jewish women and a low level of marital fertility.) This decline in fertility is itself associated with the high educational attainment and the increasing labor force participation rate among Jewish women. The low marital fertility has persisted throughout the twentieth century and there is little reason to expect that it won't continue well into the twenty-first century.

These demographic trends in fertility and immigration have resulted in the American Jewish population stabilizing and then declining as a proportion of the US population, perhaps even in absolute numbers.

Religious Inter-marriage

By the early twenty-first century about half of all American Jewish men and women marry someone who is not Jewish by birth or conversion. The intermarriage rate varies by Jewish denomination: it is lower among the Orthodox, especially among the ultra-Orthodox, higher among those affiliated with other denominations, and highest among the non-religious (secular) Jews. It has been increasing throughout the post-WWII period, and the children of inter-married Jews are growing both in number and as a proportion of the American Jewish population.

The adult children of interfaith couples have important implications for the size and coherence of the American Jewish population. Their level of Jewish religiosity, involvement, and identity is lower than that of children of two Jewish parents and their marriage rate to non-Jews is higher.⁷ Even those interfaith families who are Jewishly involved have non-Jews as close relatives, and an increasing share of the US population has a Jewish ancestor or a Jewish cousin. The social boundaries between Jews and non-Jews is blurred, undermining the barriers that may have inhibited socio-economic mobility of Jews in the past, and at the same time weakening the social fabric of the Jewish community itself. Measures of the size and characteristics of the Jewish population will, more so in the future than in the past, depend on who is defined as a Jew.

⁷Recall (this volume, Chap. 16), that the non-Jewish spouse of inter-married couples tends to have a lower educational and occupational level than the Jewish spouse. This has implications for the economic attainment of intact Jewish families, as well as inter-married Jewish families and their offspring. One implication is increasing economic inequality between inter-married and intact Jewish families and their offspring.

Concluding Thoughts

The statistical evidence brought to bear in the previous chapters provides a framework for understanding the economic experience of American Jewry. The data come mostly from the period 1860–2000, an era in which the United States became such an important economic power that historians call it The American Century. There is evidence of Jewish poverty, of anti-Semitic hate crimes and socio-economic discrimination against Jews, especially during the first two-thirds of the period, but these experiences did not dominate the environment of American Jews. The statistics confirm that American Jews as a group thrived spectacularly in this environment with its dramatic combination of technical change, educational opportunity, and upward mobility.

Social science research involves interpreting the statistics to reveal the patterns of history. Some of the chapters in this book focus on technical and methodological issues involved in getting the numbers right. Still others analyze these patterns to understand issues of cause and effect, how and why the historical patterns emerged, with the underlying goal of drawing lessons for the future.⁸ This goal has been the focus of the present chapter, to speculate on the American Jewish future in the twenty-first century as it evolves from the American Jewish experience of the twentieth century.

The lessons of history are not always easy to understand. In the past, higher education almost always led to good jobs that not only yielded comfortable incomes but were often intellectually and emotionally satisfying as well. This may no longer be something to take for granted, however. The economic value of higher education depends on an environment over which Jews have little control, and changes in the socio-economic context can affect the market value of educational credentials. While specialized higher education will continue to be a *sine qua non* for entry into high-level professions, twenty-first century technology is likely to provide more opportunities for paraprofessional occupations which, although earnings may be lower, require less schooling and yield many of the same benefits.

Some of the demographic patterns observed above will also impact the economic status of American Jews in the twenty-first century. Low Jewish immigration, low fertility, high rates of inter-marriage, and the increasing number of non-Jews with higher education suggest several possibilities. Fewer Americans who self-identify as Jews will have two Jewish parents, a Jewish spouse, and exclusively Jewish children and grandchildren. More Jewish families will have close relatives who are not Jews, and more non-Jewish families will include Jews among their members. The relative distinctiveness of Jews by high levels of educational attainment and economic success will diminish but is not likely to disappear entirely.

⁸The economic experience of American Jews also provides incentives that affect family life and even religious observance (C. Chiswick 2014). Although beyond the scope of the present study, these are also likely to be affected by twenty-first-century changes in the economic context.

The extent to which these trends continue, and new trends emerge, will be a fertile subject for research in future decades. The success of this research will depend on the data, and new historical patterns will require new statistical evidence. The attention to data in these studies, as well as the analysis of emerging economic experiences, will provide guidance for asking the relevant research questions and developing surveys that provide evidence to address them.

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